

A KANTIAN PROGRAM FOR CONTEMPORARY ISSUES
IN BUSINESS ETHICS

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ABSTRACT

Theoretical approaches to business ethics have been dominated by empirically oriented ethical theories that largely follow in the Enlightenment tradition whereby ethical theories play only a supportive role. However, recent problems have emerged in business that are largely systemic in nature and may have significant and longstanding impacts that are social, political and economic in nature. Climate change and resource depletion are included in these problems, as are recurrent financial crises. These problems would indicate that ethical theory could be playing a more significant role. Kantian ethical theory has been revived over the past thirty years, thanks to the work of John Rawls. However, Rawls has given Kantian theory a largely empirical orientation to make it more acceptable to mainstream currents of thought. Recently, there has been a movement in Kant studies away from this Rawlsian approach towards more metaphysically oriented patterns in Kant's philosophy, particularly in his ethical, political and social contract theory. This dissertation explores the possibility that these new streams of Kantian research could be applied to business ethics with respect to these structural problems and issues. More specifically it investigates the use of the precautionary principle as a viable approach to business problems in concert with the use of preventative strategies. It is further suggested that the precautionary principle could be used in conjunction with the doctrine of double effect as applied to principles rather than actual events. The dissertation then provides a detailed examination of the emergence of structural problems that relate to issues in the natural world (climate change, resource depletion) and in finance. For the latter, a case study is built around Long Term Capital Management, a hedge fund that failed in 1998 and which generated significant potential instability in

financial markets. It is argued that these structural problems can build up over long periods of time and create disruptions between short and long term considerations. They also generate considerable uncertainty and make risk calculation more difficult. The dissertation concludes by building a Kantian model as the basis for analyzing problems of this nature.

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CHAPTER 1: INTRODUCTION

Preface: Revisiting The Relationship of Business and Ethics

God isn't compatible with machinery and scientific medicine and universal happiness. You must make your choice. Our civilization has chosen machinery and medicine and happiness.

Aldous Huxley¹

Faith in science, which after all exists undeniably, cannot owe its origin to a calculus of utility; it must have originated in spite of the fact that the disutility and dangerousness of the "will to truth," of "truth at any price" is proved to it constantly.

Friedrich Nietzsche²

Our culture has produced the science and technology it needs to save itself. It has the wealth needed for effective action. It has, to a considerable extent, a concern for its own future. But if it continues to take freedom and dignity, rather than its own survival, as its principal value, then it is possible that some other culture will make a greater contribution in the future.

B. F. Skinner³

This dissertation will argue that significant features of modern business practice, features that have developed in conjunction with the evolution of the twenty-first century capitalist system, require that the relationship of ethics and economics be reexamined. Conventional understandings of this relationship have evolved within the framework of assumptions that put ethics at the service of economics. It is in this sense that business

¹ Aldous Huxley, *Brave New World* (Harmondsworth: Penguin Books Ltd., 1955), 183.

² Friedrich Nietzsche, *The Gay Science*, (Book Five, "We Fearless Ones," 344) Walter Kaufmann, trans. (New York: Vintage Books, 1974), 281.

³ B.F. Skinner, *Beyond Freedom and Dignity* revised edition (Indianapolis: Hackett Publishing Company, 2002), 181.

ethics is widely thought to be the handmaiden of economics and not an equal partner.

What, one might ask, is the genesis of this view of the ethics/economics relationship?

A longstanding historical distinction between moral philosophy and natural philosophy served philosophers and intellectuals for several centuries and became manifest in several forms: from Thomas DeQuincey's distinction between the literature of knowledge and the literature of power⁴ to Immanuel Kant's distinction between theoretical and practical reason. After Kant, under the progressive impact of positivist and empiricist thought, moral philosophy declined in relative importance vis-à-vis the philosophies of science, mind and language. Over the past half century leading philosophers have turned their attention back to ethics, viewing it largely as an unexplored frontier - in general seeking the grounds for its naturalization. Writing in 1985, Thomas Nagel complained: "The best reasons for skepticism about ethical theory are the meagerness and controversiality of its results and the lack of agreement over methods.... (E)thical theory, if there is such a thing, is in its infancy."⁵ This assessment did not prevent Nagel from becoming a co-founder of the Society for Ethical and Legal Philosophy and the journal *Philosophy and Public Affairs* as a response to the burgeoning interest in issues in applied ethics associated with the Vietnam War, abortion, the civil rights movement, etc. He could even hope that "moral intuition and systematic reasoning could be combined to yield substantive progress on real normative questions."⁶ Yet in surveying the whole field of philosophy Nagel regrets the fact that "the Carnap-Quine

⁴ DeQuincey drew a distinction between works concerned with empirical knowledge that are provisional in nature and literature deemed to have an artistic merit that has the power to move and affect the reader's emotions and thus is immutable and can never be superseded. Thomas DeQuincey, "Literature of Knowledge and Literature of Power." First printed in *The North Britain Review*, August 1848, as part of a review of *The Works of Alexander Pope*, W. Roscoe, ed. 1847.

⁵ Thomas Nagel, *Other Minds: Critical Essays 1969-1994* (New York: Oxford University Press, 1995), 182.

⁶ *Ibid.*, 6.

tradition has come to dominate the profession” and that “the spirit of theory construction ... sees philosophy as continuous with science.”⁷ He goes on to state:

Without a strong grasp of the uniquely philosophical character of certain problems, it is too easy to fall prey to scientism, the idea that any genuine question can be handled as part of the development of a scientific worldview, and that what can’t be isn’t a real question. This outlook can lead to work of astounding superficiality.⁸

The predilection for scientific rigor not only dominates analytic philosophy but the social sciences as well. A corresponding instrumentalization of ethics has followed in its wake. Economics gives preeminence to rational self-interest and generally considers ethical issues as instrumentally important in helping to create a state of equilibrium; thus, the prerequisites of perfectly competitive markets (equal access to markets, inability to influence prices, etc.) and/or pareto optimality are satisfied⁹ but relatively inconsequential once those conditions have been realized. Debates between social scientists and sociobiologists devolve into questions of meme analysis,¹⁰ genetic determinism of human behavior or cultural influences in which ethical issues are often seen as emergent from evolutionary forces.¹¹ Even continental philosophy generally downplays the importance of ethics as unnecessary theorizing or as exercises in grand narratives.¹²

⁷ *Ibid.*

⁸ *Ibid.*

⁹ Cf. Daniel M. Hausman and Michael S. McPherson, *Economic Analysis and Moral Philosophy* (Cambridge: Cambridge University Press, 1996), 41-45.

¹⁰ The central argument turns on the claim that all social structures, including free markets, are dependent upon underlying evolutionary phenomena, analyzed through the study of memetics. The concept of memes was developed by Richard Dawkins and further refined by philosophers such as Daniel Dennett to express the process by which small units of information are formulated and transmitted through processes of both biological and cultural evolution. This strictly empiricist view of sociobiological origins of ethics has been recently criticized by Jonathan Haidt, a moral psychologist at the University of Virginia, who claims that the evolution of morality is inextricably linked to cultural phenomena such as myth, religion and ritual. He further claims humans possess innate psychological mechanisms that create a predisposition to the acquisition of virtues and values, thus apparently opening a role for moral intuitionism. Jonathan Haidt, *The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom* (New York: Basic Books, 2006).

¹¹ Cf. James Rachels’ *Created from Animals: The Moral Implications of Darwinism* (1998), as well as Daniel Dennett’s *Darwin’s Dangerous Idea* (1995) and *Freedom Evolves* (2003). Dennett (1995) argues that moral dispositions are the result of an emergent adaptationism. His argument for strong artificial

The most durable ethical theory over this period has been utilitarianism, and its success is due in no small measure to its close contiguity with technological advances and the resulting dominance of scientific methods and procedures. Cost benefit analysis has become a measure not only of ethical consequences but also of economic efficiency.

Apart from utilitarian approaches, Herbert Spencer and T.H. Green sought out new ethical principles that would reformulate social philosophy under the overarching tenets of the theory of evolution. Adam Smith's "invisible hand" and the moral sentiment theories of eighteenth century British philosophy provided the ethical justifications of industrial growth and the concomitant efforts at social legislation drafted in Britain to control it. Despite the successes of ethical intuitionism in the early twentieth century in raising challenges against the prevailing naturalist views, emotivism would go on to become the dominant metaethical theory. With the dominance of positivism in the late nineteenth century and the first half of the twentieth century came the overall project to diminish the importance of metaphysics and to "detranscendentalize" philosophy.¹³

intelligence is based on his claim that there are no non-algorithmic functions of consciousness that would allow any significant distinction to be drawn (in principle) between humans and advanced robots. Dennett claims this is true for diverse issues ranging from meaning and intentionality to Godel's theorem. Yet Dennett realizes that there are no ethical algorithms and that there is no simple way (apart from what he terms "greedy reductionism") to derive an "ought" from an "is." This leads to Dennett (2003), an attempt to collapse the free will/determinism distinction and thereby provide an evolutionary account of both freedom and morality in spite of his concession that technological advances diminish the autonomy of human agents. Daniel Dennett, *Freedom Evolves* (New York: Viking, 2003).

¹² Nietzsche and Sartre both emphasized a complete overhaul of the structures of ethical valuation. Heidegger originally argued for the subordination of ethics to ontology, but later did important work in setting forth the dangers of rampant technology.

¹³ This term was coined by Richard Rorty. Other philosophers such as Kai Nielsen have attacked the entire enterprise of metaphilosophy. Cf., Kai Nielsen, *On Transforming Philosophy: A Metaphilosophical Inquiry* (Boulder, Colo.: Westview Press, 1995). Both Nielsen and John Rawls argued that metaethical issues could be "set aside" to address substantive issues. A cautionary note has been sounded by Stephen Darwall, Alan Gibbard, and Peter Railton. In their analysis of the state of metaethics in the 1990's, they argued that G.E. Moore's "open question" dominated metaethical concerns at the end of the twentieth century as much as it had at the beginning. However, any new (and laudable) project for realizing the objectivity of moral judgments or for developing new ethical theories must be measured against "the model of the objectivity of empirical science." Stephen Darwall, Allan Gibbard, and Peter Railton. "Towards *Fin*

The continuing goal of science-oriented philosophers has been to find ways to “naturalize” ethics. Even after the decline of positivism in the later decades of the twentieth century and the subsequent shift away from metaethical theories, the chief concern has largely remained focused on substantive principles and on maintaining an empiricist and instrumentalist orientation to ethical theory.

Over the last two decades of the twentieth century a series of major business ethics scandals has arisen that has grown in intensity and significance during the first years of the twenty-first century, raising serious questions about the adequacy of current approaches to business ethics. Serious accounting irregularities, often involving conflicts of interest between accounting and consulting services, have resulted in numerous cases of alleged corporate fraud (Enron, Global Crossing, Parmalat, etc.) and the collapse of a major accounting firm, Arthur Andersen.¹⁴ The multi-trillion dollar mutual funds industry was placed under an intensive investigation for illegal and irregular timing of market transactions.¹⁵

de Siècle Ethics: Some Trends,” (115-189) *The Philosophical Review* (January 1992), vol. 101, no.1, 128.

¹⁴ Derivatives transactions, an important element in the collapse of Long Term Capital Management in 1998, have also become an important source of concern. Britain’s former regulatory agency, the Financial Services Authority (FSA), warned that British banks had fallen seriously behind in the task of documenting and verifying the complex terms and conditions of their derivatives contracts. The reasons are easy to understand. In 1986 the nominal value of derivatives was estimated at \$500 billion. This rose to \$8 trillion by the end of 1993 and to \$47.5 trillion by 1995. Ten years later, this total had grown to \$270 trillion. This global derivatives market was double the size of the value of all goods and services produced in 1998, five times as large in 2005. In response to the bank run (and subsequent collapse) experienced by Northern Rock bank in 2008, the British Bankers Association called for a worldwide review of regulatory practices, including derivatives accounting. *UK Financial News*, October 8, 2007.

¹⁵ In 2003, the New York Attorney General’s Office launched investigations into Canary Capital Partners, and other mutual funds for market timing and late trading activities. Late trading involves illegal transactions that bypass the necessity of determining fund prices at a fixed time each day, usually at 4:00 PM after the closing of all stock trading for the day. Purchases and sales of fund units that occur throughout the business day must be based on the uncertainty of pricing that can only be fixed after the close of trading on that business day. Late traders thus gain an unfair advantage by knowing the price prior to the decision to buy or sell. Market timing involves large purchases and sales made for short term exploitation of price movements during the day. Often involving the arbitrage of different markets, timing exploits the long term nature of mutual fund investments by piggybacking on their liquidity requirements

The scope and breadth of these scandals is both extensive and dangerous. A major derivatives scandal of the magnitude of Long Term Capital Management (LTCM) in 1998 would have the potential to bring down the global financial system and with it the technological networks that are essential to the functioning of the business and financial processes of highly advanced first world nations.¹⁶ (The LTCM case is analyzed in greater length in Chapter 2.)

These scandals have generated responses. Business ethics courses have been given a higher priority and frequently made compulsory in many business schools, particularly in the United States. In some cases, governments and regulatory agencies, particularly in the United States, have responded with legislation strengthening standards of oversight and regulation. The Sarbanes-Oxley Act is an example. Passed by the U.S. Congress in 2002, it legislates management responsibilities for the veracity of financial reporting and restricts the powers of executives to borrow from their own companies, among other provisions. It is symptomatic of the current state of business ethics that the costs imposed by this Act balanced against its putative benefits have now lead to challenges by corporate lobby groups who point to the hardships encountered by small to medium size companies in meeting the Act's stringent conditions for internal auditing.

There are other examples of questionable regulatory interventions motivated by ethical crises and scandals. The collapse of Herstatt and Franklin Banks in the mid-1970's produced the Basle Concordat (which divided responsibilities for the supervision

and management administration costs that have to be borne by all the unit holders in a given fund. (Large traders pay far lower transaction fees than they would otherwise pay. Liquidity reserves held by the fund have to rise to facilitate large transactions and must be borne by all unit holders.) Canary, a major hedge fund, settled the SEC complaint for \$40 million without admission of guilt. Other hedge funds have also been investigated for inside trading.

¹⁶ For an account of the LTCM disaster, see Roger Lowenstein, *When Genius Failed: The Rise and Fall of Long Term Capital Management* (New York: Random House, 2000).

of international banking operations), which in turn failed to prevent the collapse of Banco Ambrosiano in 1982. The 1991 collapse of BCCI, the Bank of Credit and Commerce International motivated the U.S. government to pass the Foreign Bank Supervision Enhancement Act, which among its other provisions constrained the operation of all foreign banks operating in the U.S. (to the benefit of domestic U.S. commercial banks) and thus contravened the principles of the Multinational Agreement on Investments (MAI), which the U.S. was actively promoting around the world.¹⁷

As we shall see, contradictions between and among ends - for example short term and long term ends - raise issues that instrumentalized approaches to business ethics are ill-equipped to resolve.

In yet other cases, corporations have responded by severely punishing low level ethics violations by senior and middle managers while taking a lenient attitude towards more serious misdemeanors. For example, two senior Bank of America investment bankers were terminated for aggressive marketing practices with respect to a merger takeover target. Thomas M. Coughlin was forced to resign as vice-Chairman and director of Wal-Mart over alleged expense account abuses. Harry C. Stonecipher was fired as CEO of Boeing over a consensual affair with another Boeing executive. Yet in a far more serious case, Time Warner paid a \$300 million fine to the Securities and Exchange Commission (without admitting guilt or liability) for overstating advertising revenue and then refused to fire any of its executives, including the CFO who had approved the accounting transactions in question --three executives made separate settlements with the

¹⁷ The Banco Ambrosiano scandal was analyzed by R.T. Naylor in *Hot Money and the Politics of Debt* (Toronto: McClelland and Stewart, 1987), 81 – 92. For the BCCI collapse, see Peter Truell and Larry Gurwin, *False Profits: The Inside Story of BCCI, the World's Most Corrupt Financial Empire* (Boston: Houghton Mifflin Company, 1992).

SEC without admitting guilt or responsibility -- in spite of the fact that Time Warner's former merger partner, America On-Line, had a long history of repeated abuses of accounting for advertising and marketing expenses.¹⁸ Harsh action for relatively low level ethics violations can be interpreted as a strong corporate response to ethical issues and to compliance with corporate ethics codes, and thus provide the basis for good public relations in the wake of Sarbanes Oxley. On the other hand, strong resistance against action to address more serious ethical issues may be imperative in the face of potential criminal and civil court actions.¹⁹

In many cases there has been no regulatory response at all. The collapse of Arthur Andersen failed to produce a strict legal divide in the U.S. between accountancy and consulting services. The downfall of Long Term Capital Management in 1998 produced no legislative or regulatory response whatsoever.

Finally, some regulatory interventions have simply failed to correct underlying problems. For example, most of the senior executives responsible for the Enron collapse were successfully prosecuted, but the Enron case itself has left a number of important issues insufficiently addressed.²⁰

I shall argue that this record of moral disasters reflects a broader pattern of moral failure. With the rapid change and growth of complexity in international business, many

¹⁹ Landon Thomas Jr., "On Wall Street, A Rise in Dismissals Over Ethics," *New York Times*, March 29, 2005.

²⁰ Kenneth Lay and former CEO Jeffrey Skilling were convicted in May 2006 on a combination of charges including conspiracy, inside trading, securities and wire fraud. To obtain a conviction in Lay's case, the prosecution had to focus on egregious activities after Lay resumed the CEO's position in August 2001 after the company was already in a downward spiral. None of the underlying conditions of the fraud - the abuses of accounting and legal consultancy, the use of political influence to bypass regulatory control, the capacity of corporations to manipulate special purpose entities, etc. - was adequately addressed. Enron whistle blower Sherron Watkins noted that in her opinion another Enron could easily happen again. The three year delay in bringing charges against Lay and Skilling was a measure of the complexity of the Enron case in comparison with more straightforward frauds at WorldCom, Tyco or Adelphia, where successful convictions were obtained much more rapidly.

banks, governments and corporations find it difficult to adapt, and so have tended to resist and deny the need for the kind of regulatory reform needed to protect and sustain an effective regulatory environment.

I shall argue further that theories such as consequentialism that currently dominate the field of business ethics cannot address the ethical issues raised by these failures in a fully satisfactory manner. This is because their focus is the instrumental value of ethics with regard to established paradigms and tenets of economics. In what follows, I will argue that new approaches need to be devised if the kinds of moral disasters that have characterized recent business history are to be understood and if the necessary structural changes required to avoid similar disasters in the future are to be put in place. This is because approaches to business ethics that currently dominate thinking in the field are hostage to the imperatives of economic growth and technological advance. The full-strength metaphysics of Kant's ethical theory will have to be revived in order to effectively analyze and address the economic forces that lie behind these moral disasters, as well as the social, economic and environmental crises that have become so increasingly common. It will be argued that Kantian ethics is better suited than competing, empirically oriented theories to establish preconditions for preventing such moral disasters from occurring.

This dissertation is not the first attempt to bring an ethical analysis to the study of economic structural weaknesses. It is also not the first attempt to bring a Kantian analysis to the problems of modern business ethics. Norman E. Bowie's 1999 book *Business Ethics: A Kantian Perspective*²¹ provides an excellent start for the project of introducing Kantian theory into modern business contexts. But Bowie's analysis is

²¹ Norman E. Bowie, *Business Ethics: A Kantian Perspective* (Oxford: Blackwell Publishers Ltd., 1999).

largely confined to domestic issues and does not push the envelope far enough with respect to international contexts. More significantly, Bowie is prepared to work within existing economic frameworks and not to address structural issues in a significant way.

Empiricist ethical approaches are not working well because of their subordination of ethics to economic and technical imperatives. The assumption that rational preferences and the pursuit of self-interest provide a sufficient basis for the scientific management and governance of political, social and economic systems – with the corollary that ethical issues, concerns, priorities and approaches are somehow welded into the overall framework of the Western project and can be set aside until actual moral disasters occur – is insufficient. Moral concerns must be explicitly articulated and principles formulated at the outset of all business decisions; moral foundations must be apparent in all structural analyses of business and economic systems operative on both a national and international level. It has been suggested here that empirical approaches to ethical theory are not adequate to meet these requirements, that they are subject to the serious criticisms that have been introduced here. In contrast, the dissertation sets out a Kantian approach to creating an ethical framework for addressing contemporary issues in business, social and political ethics.

The approach to Kantian ethics that will be advanced here differs sharply from the constructivist model offered by John Rawls or the utilitarian model offered by R.M. Hare.²² Strong emphasis will be given to the metaphysical approach of Kant's moral, political and religious philosophy: the reciprocity of freedom and morality, the imperatives of autonomy and rational agency as preconditions for the exercise of the

²² R.M. Hare, "Could Kant have been a Utilitarian?" Chapter 8 of *Sorting Out Ethics* (Oxford: Clarendon Press, 1997). John Rawls, "Kantian Constructivism in Moral Theory: The Dewey Lectures 1980." *Journal of Philosophy* vol. 77 (1980).

categorical imperative, the role of the synthetic a priori in making freedom an actuality. Particular emphasis will be given to Kant's self-sufficiency condition and the reciprocity of state and property that form the basis for Kant's approach to social contract theory and his theory of initial property acquisition. John Rawls is well known for starting from a position of moral realism and developing his approach to Kant to accommodate a contrary position, that of ethical constructivism. Rawls' purpose was to establish the primacy of substantive moral theory without undue concern for problems and issues in metaethics. This dissertation will suggest a reverse approach for Kant: the case Rawls makes for ethical constructivism can be worked backwards to make Kant more compatible with moral realism. Thus the case that Hare makes for Kant as a utilitarian will be rejected. However, the final conclusion of this dissertation will be the claim that the development of a Kantian theory with a strong metaphysical basis is a necessary but not sufficient condition for addressing modern technological, social, political and business issues. Kant's theory must be compatible with, but not coextensive with, modern consequentialist theory.

CHAPTER 2: THE ENLIGHTENMENT LEGACY & ITS ASSUMPTIONS

Introduction:

The introductory comments made in the first chapter regarding the relationship between ethics and economics are conducive with a standard, accepted view of economic development as an “onward and upward” trajectory of generally uninterrupted growth if the subordinated role of ethics is accepted. Historically, the pattern of international development has, since the end of World War II, encompassed two major paradigms: the Bretton Woods agreement and globalization, both of which have been the subject of extensive criticism.²³ Prospects for future prosperity in the West have also been extensively challenged, the latest challenge emerging from Europe’s sovereign debt crisis. This, of course, leaves aside numerous other problems: global warming, resource depletion, escalating levels of private, corporate and government debt, outside Europe as well as within it.²⁴ However, the comments in the opening chapter draw attention not to failures of empirical reasoning or prognosis, but failures of moral reasoning. In this regard, the program of economic prosperity that has guided the West and all of its major intellectual currents over the past two centuries may be brought together under the rubric

²³ Among the more prescient works on this subject are those by former World Bank chief economist Joseph Stiglitz and financier George Soros. Joseph Stiglitz, *Globalization and its Discontents* (New York: W. W. Norton, 2002). George Soros, *Open Society: Reforming Global Capitalism* (New York: Public Affairs, 2000). See also John Ralston Saul, *The Collapse of Globalism and the Reinvention of the World* (Toronto: Viking, 2005). The ultimate historical impact of Bretton Woods remains a subject of controversy. While playing an important role in facilitating and advancing the benefits of globalization, the institutions of the Bretton Woods system, the IMF and World Bank, have been blamed for austerity measures launched in response to the global debt crisis of the early 1980’s. “The pain and suffering generated by the Bretton Woods institutions are immense. They can be measured in the tens of millions of people displaced, impoverished, marginalized and sent to premature death by economic projects and policies that have subordinated human and community values to free markets and growth targets.” John Cavanagh, Daphne Wysham and Marcos Arruda, *Bretton Woods: Alternatives to the Global Economic Order* (TNI 1994) xii

²⁴ Debt problems have been extensively analyzed by numerous critics, including former Federal Reserve Chairman, Paul Volcker (“An Economy on Thin Ice,” *Washington Post*, April 10, 2005, B07). Others have correlated debt issues with those of ongoing budget and trade deficits in the U.S.

of the Enlightenment project, a project which in its broadest outline represents a collective social effort to minimize the impact of religion, dogmas and superstition on social and economic development and to privilege the supremacy of reason and the scientific method as the keys to human progress.

The Enlightenment was a broadly based intellectual movement that gained traction in Western Europe during the seventeenth century and dominated major currents of thought in the eighteenth. It was a movement based on an unwavering belief in the power of reason to transform and improve human prosperity and social existence through the development of scientific knowledge. Civilizations would continue to advance as human rationality and the increasing stores of knowledge gained through its exercise created a self-reinforcing process of progress through the course of history.

If the enlightenment project and its general precepts are sound, then the possibility of moral disasters as outlined in the opening chapter should not constitute a threat, except as unanticipated and exceptional occurrences. Extensive commitments to rationality as entailed by the Enlightenment project should result in an ancillary and concomitant development of impartial beneficence and cooperative social efforts that would render implausible the claim in chapter one that the “record of moral disasters reflects a broader pattern of moral failure.” From an economic perspective, any society committed to growth imperatives should be firmly committed to its own standards of sustainability and thus be able to use increasing rationality and technical knowledge to continually improve the stability of economic and business systems, with the result that innovations and new product developments are readily assimilated into existing technological networks and structural systems that themselves can always be made

subject to enhancements and improvements.²⁵ From an ethical perspective, the increased emphasis on reason should result in greater instances of cooperative enterprises coupled with stronger commitments to impartial beneficence within a sustainable economic system.

The purpose of this chapter is to provide a more detailed explanation of the failure of ethics and economics to provide a successful, collaborative program as modern business practices evolved and created enormous material benefits from the era of the industrial revolution in the nineteenth century into the technological revolutions of the twenty and twenty-first centuries. It will be argued that the growing complexity of these revolutions did not always result in effective legal or regulatory responses, did not guarantee a seamless assimilation of new innovations into coordinated networks, and did not ensure that various institutional frameworks and structural mechanisms such as the “invisible hand” would always guarantee that private vices would automatically become transformed into public goods. Instead, it will be argued in this chapter that increasing complexity continuously brings to light new paradoxes, dilemmas and Hobson’s choice

²⁵ Concurrent with and closely related to the Enlightenment project was a belief in human progress that began with Condorcet, who established progress as a separate theme of the Enlightenment with his work, *Esquisse d'un tableau historique des progrès de l'esprit humain* (1794). Here, he states quite categorically that “nature has set no term to the perfection of human faculties” and “the perfectibility of man is truly infinite” (although he adds a prescient proviso, warning against “such changes as will deprive the human race of its present faculties and its present resources”). Antoine Nicolas de Condorcet, *Sketch for a Historical Picture of the Progress of the Human Mind*, trans. June Barraclough (London: Weidenfield, 1955), 4-5. Belief in this vision of progress found perhaps its strongest expression in the nineteenth century in the works of Herbert Spencer, who combined positivism and utilitarianism with a belief in the evolution of human societies towards higher standards of cooperation and peaceful co-existence. Hegel, by contrast to Spencer’s empiricism, elaborated the metaphysics of progress, while John Dewey, strongly influenced by Hegel, incorporated the concept into his Pragmatist philosophy. But the twentieth century saw the separation of beliefs in progress and evolutionary development from their Enlightenment roots. As Hannah Arendt noted in her study of totalitarian systems, these repugnant ideologies could thrive because they could always reference the achievement of their objectives to a future that must inevitably come to pass as a result of historical forces that must necessarily privilege the dominance of the master race or the dictatorship of the proletariat. Hannah Arendt, *The Origins of Totalitarianism* (New York: Harcourt, Inc., 1976), 460 – 479.

scenarios that constantly necessitate specific applications of normative or non-instrumental rationality which may not be sustainable in the long term because of the intractability of the problems, the unanticipated contingencies attendant upon their resolution, and the narrowing time frames in which these problems must be solved. This chapter will attempt to set forth these issues in detail, demonstrate how empirically-oriented ethical theories such as consequentialism have served as the handmaidens of economics in the development of solutions to these problems, and then elaborate specific real-world examples. The larger theoretical issues will be examined, and then the chapter will conclude with an analysis of the Enlightenment legacy.

The Aspirations and Objectives of the Enlightenment Project

All productive initiatives and effort presuppose some fundamental understanding of the functions of the natural order, which through regularities of biological and physical laws creates a structural system of interrelated forces and entities that constitute the material world. One of the explicit goals of the Enlightenment had been a greater understanding of the efficient, predictable and law-like functioning of the natural world with the objective of procuring greater benefits through the application of scientific principles in commercial enterprises. A second goal was the reformation and constitutional restructuring of social and political institutions, the parliamentary and bureaucratic organizations that ordered and regulated human affairs. As with the scientific understanding of the material world, it was believed that through the exercise of human reason (and through the conceptualization of rights of life, liberty and property) man-made structural frameworks could be made to function as effectively, efficiently,

predictably and automatically as those of the natural order. If human systems could be made this reliable, as Condorcet, for example, had argued,²⁶ individual agents could exercise much greater freedom to choose their own private goals and objectives and be subject to less constraint from religious authorities concerned to establish and enforce what has been termed the “final ends” of human existence: multigenerational social commitments that bound individuals to a culture and community through traditions and rituals.²⁷ While this religious vision had the power to promote interpersonal harmony and social cohesion, it had also been the source of conflict in Europe since the onset of the Reformation, and Enlightenment thinkers were determined to curtail its influence.²⁸

²⁶ “All errors in politics and morals are based on philosophical errors and these in turn are connected with scientific errors. There is not a religious system nor a supernatural extravagance that is not founded on ignorance of the laws of nature.” Condorcet, *op cit.*, 127 – 128.

²⁷ The rejection of a Thomistic inspired, divine teleology advocated by the Christian establishment was a hallmark of Enlightenment thinking but this opposition was for the most part centered on beliefs in rational progress, and Condorcet’s thinking was reflected in that of the Encyclopaedists, Physiocrats and others. Hume went further in advancing the case for the unfettered development of instrumental rationality, the separation of facts from values and the dichotomy between morality and religion. Rousseau, by contrast, rejected this position, arguing that scientific progress could go hand in hand with the continuing corruption of human society. This line of thinking was picked up in Germany by Hamann and especially Herder, who sought to limit the influence of Enlightenment rationality by arguing that it too aimed for “final purposes” or “final ends” through universalization of the ideals of scientific rationality. Herder believed that there was indeed a divine plan for humanity, but one in which reason played only a supporting role and had to be made part of a social consensus generated in communities. Kant disagreed with this position, arguing that reason itself had to transcend any range of beliefs situated in a community through the rigorous efforts of autonomous agents. It was Kant himself who developed the concept of the “final end” (*endzweck*), which he distinguished from the “ultimate ends” (*letzter zweck*) of nature. Nature must be seen as projecting its own greatest objectives through the rational power of human beings to set their own greatest objectives, expressed through the summum bonum of perfecting both human agents and the societies in which they lived. For a useful discussion of these issues, cf. Allen Wood, *Kant’s Ethical Thought* (Cambridge: Cambridge University Press, 1999), 226 – 233, 309 – 311. The explicit rejection of “final ends” as an intrinsically valuable concept came two centuries later with the Pragmatist philosophy of John Dewey.

²⁸ Enlightenment figures thus readily fell back on the idea that progress itself would establish humanity’s ultimate objectives, since there would be a natural and inevitable cohesion between scientific and social purposes. As Frederick Copleston puts it: “... (t)he typical philosophers of the French Enlightenment represent the idea that man’s betterment, welfare and happiness rest in his own hands. Provided he frees himself from the notion that his destiny depends on a supernatural power ... and provided he follows the path marked out by reason, he will be able to create the social environment in which true human morality can flourish.... The idea, which later became so widespread, that the growth of scientific knowledge and a more rational organization of society would inevitably bring with them an increase in human happiness and further the attainment of sound moral ideals, was a development of the outlook of the Enlightenment.” Frederick Copleston, *A History of Philosophy* Vol. VI (New York: Doubleday, 1994), 418 – 419.

Another key structural element was the free market, a phenomenon articulated in the Enlightenment era principally through the work of Adam Smith. An “invisible hand” was deemed to guide self-interested businessmen towards the benefit of the society at large through the transformation of private vices into public goods. This concept was later clarified throughout the nineteenth and twentieth centuries by numerous economists such as Ludwig von Mises and Friedrich Hayek.²⁹ It was believed that market structures and practices emerge spontaneously through trading activity and that price mechanisms are their most salient structural feature. Markets thus do not merely organize “private vices” but information as well (Hayek³⁰), and thus require little interference from government authorities, who may be misled into the belief that markets should be rationally organized and directed from above. Mises and Hayek argued that markets self-organize information into tangible benefits with automatic efficiency. Free markets can then motivate the kinds of advocacy and lobbying activities needed for reforming social and political institutions as required to make them more conducive to business activity.

Thus, a cornerstone of the Enlightenment project was the belief in the power of human improvements and innovations realized through scientific investigation and applied through commercial practice. New inventions and discoveries could be readily assimilated into networks of existing innovations and technical systems, with anomalies and externalities reliably identified and corrected. These exceptional conditions would generate appropriate legislative or regulatory responses devised not only to ensure the proper and effective functioning of technological systems, but also to safeguard human and property rights.

²⁹ Cf. Kenneth Hoover, *Economics as Ideology* (London: Rowman & Littlefield, 2003).

³⁰ Friedrich A. Hayek, “The Use of Knowledge in Society” (519 - 539) *American Economic Review* vol. 35, no. 4, (September 1945).

The Enlightenment: Two Fundamental Assumptions

The enlightenment project was based on two fundamental assumptions

1. Human reason expressed through the application of the scientific method is the key to harnessing nature for human benefit and therefore the key to economic development.
2. The pursuit of private economic goods will generate public goods and serve the public interest if private economic goods are pursued in free and therefore competitive markets where economic actors are free to pursue their individual ends through the free exchange of goods and services.

Science is the key to both of these assumptions. Pure science, the open search for answers to questions posed by the physical world, is central to the first assumption; applied science, the use of the scientific method to innovate or to solve problems posed by the social or commercial worlds through the aegis of free markets, is crucial to the second assumption.³¹ These two assumptions have guided economic development since the sixteenth century with remarkable results. For example, during the transition to the period of the Enlightenment, the ability to cut metal to precisions measured in thousands of an inch was crucial to the development of astronomical instruments needed to measure the motions and positions of heavenly bodies. These instruments then became critical tools of navigation in the voyages of discovery. However, they also proved essential in

³¹ These two assumptions have been formulated in different ways in the past that deviate from the way that the two assumptions have been expressed here. Bertrand Russell drew a distinction between theoretical science, the endeavor to understand the world, and practical science, which is the enterprise of changing the world. Practical science was the key to both the power and utility of science, but was also dangerous because in Russell's view men would lose sight of the ultimate risks of uncontrolled applications of the scientific method. Bertrand Russell, *A History of Western Philosophy* (New York: Simon & Schuster, 1945), 491 – 495. More recently Bernard Williams drew the line between science and “ethics,” holding that scientific objectivity was based on an “absolute” conception of reality that was very much different from the domain of practical reason. The latter deals with questions as to how to live that are inevitably subjective and inevitably distorted whenever one denies the motivational force of desires or private projects and seeks to ascend to an objective standpoint that is appropriate only for a scientific perspective. Bernard Williams, *Ethics and the Limits of Philosophy* (Cambridge, Mass.: Harvard University Press, 1985).

developing machine tools that could mass produce replacement parts for rifles, weapons that previously had to be discarded in their entirety when their firing bolts were damaged or wore out. Such techniques of building machine tools facilitated the start of the industrial revolution and made possible a vast expansion of free markets.³²

These twin assumptions work well together as long as pure and applied sciences are mutually reinforcing. Important discoveries in pure science tend to be contingent and accidental, its activities less prone to the service of material interests. Ingenious and profitable applications of applied science spurred research in pure science and opened up entirely new fields of scientific investigation. For example, punch card driven looms and player pianos stimulated the eventual development of computer science; the explosion of the oil industry led to the development of petroleum-based synthetic chemicals; advances in chemical and electrical sciences occurred simultaneously and fed off each other (e.g. electrolysis) and resulted in industrial applications such as electroplating and anodization. However, with increased industrial and technological complexity these synchronicities became more difficult to achieve. Research and development became increasingly expensive and institutionalized, more based on specialized expertise.³³ Practical science,

³² David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (Cambridge: Cambridge University Press, 2003). Joel Mokyr notes that it wasn't until theoretical and applied sciences became well coordinated (after 1870) that the industrial revolution truly exploded. Prior to that, as he notes, the industrial revolution "had little scientific base. It created a chemical industry with no chemistry, an iron industry without metallurgy, power machinery without thermodynamics. Engineering, medical technology, and agriculture until 1850 were pragmatic bodies of applied knowledge in which things were known to work, but rarely was it understood why they worked." Joel Mokyr, "The Second Industrial Revolution, 1870 – 1914," (August 1998) Chicago: Northwestern University. <http://faculty.wcas.northwestern.edu/~jmokyr/castronovo.pdf>, 1.

³³ As far back as the 1930's, the renowned economist Joseph Schumpeter worried that innovation would no longer offer opportunities to new entrepreneurs, but would become increasingly institutionalized. Recent research has shown that private industry has become increasingly dependent upon government financed R&D. Research conducted by the National Institutes of Health in the U.S. was responsible for approx. three-quarters of new molecular entities subsequently taken over by the private sector for commercial development. Smart phone technology is equally dependent upon various elements of state sponsored research (e.g. internet, GPS, etc.) Hydraulic fracturing technology is also dependent upon government

operating in an efficient, cost effective mode of production, drove pure science towards more specific innovations and away from the free play of ideas that had stimulated its best (and most accidental) discoveries.

Evidence of these fault lines does not emerge as problematic in a compelling way until the second half of the twentieth century. From the beginning of the sixteenth century until the mid-point of the twentieth, these commercial, scientific and industrial revolutions successfully overcame technical problems and moral dilemmas and delivered on their promises of greater prosperity and increasing welfare. At the beginning of the eighteenth century Bernard Mandeville had pointed out the conflicts of commercial and Christian values that were overcome by the Protestant work ethic and Locke's emphasis on property rights. Adam Smith's paradox of value was resolved a century later by the economics of diminished marginal utility. Marx, Weber and Nietzsche all took note of problems of conflicted rationality and perverse incentives, but such problems were generally deemed to be inconsequential or resolvable in the long run by the very processes of technological complexity that had brought them into existence in the first place.³⁴

By the end of World War II, paradoxes and dilemmas began to emerge. For example, Adorno and Horkheimer wrote a key post war critique of the Enlightenment,

research. The causes of this dependence are related to the needs for cutting edge research in theoretical sciences that the U.S. military uses for its own purposes, but which also require long lead times and tolerance for uncertainties in research results that the private sector can ill afford – hence the reliance upon spin-off technologies. Martin Wolf, "A Much Maligned Engine of Innovation," *Financial Times* 8/4/13.

³⁴ This can be clearly seen in the optimism of British intellectuals and economists prior to World War I, who provided a clear contrast to the thinking of Marx, Engels and Lenin and their beliefs in the inevitable self-destruction of capitalist systems. Even J.A. Hobson, whose theories of imperialism are often closely associated with Lenin's, strongly disagreed with the structural self-destruction thesis. Hobson argued instead that the crises in the capitalist system would bring it back into alignment with liberal democracy. Cf. Bernard Porter, "Hobson and Internationalism," (167-181) in *Reappraising J.A. Hobson: Welfare and Humanism* Michael Frieden, ed. (London: Unwin, Hymen, 1990), 176.

Dialectic of Enlightenment,³⁵ that examined conflicts of social rationality first noted by Max Weber at the turn of the twentieth century. The authors contended that this process had become much further advanced, and that the techniques of controlling nature through industrial methods had themselves become problematic. The “rationalization” of social existence through bureaucracy and efficient administration now constituted a new form of enslavement, an ironic turn of events given the Enlightenment objective of greater liberation from the random disasters inflicted by nature.³⁶ As the technology of controlling nature became more complex and problematic, the powers and applications of human reason became increasingly instrumental, to the point where the supreme objectives and final ends of social existence ultimately espoused by the Enlightenment – greater freedom, time and intellectual power to explore the deeper questions of human existence – “dissolve” and the ongoing power to control nature – originally imagined as the means to the end of this “greater freedom” – itself became the final end. Thus, instrumental rationality was transformed into the only permitted form of reason.³⁷

³⁵ Adorno, Theodor, and Horkheimer, Max. *Dialectic of Enlightenment* (New York: Continuum International Publishing Group, 1982).

³⁶ The Adorno/Horkheimer thesis anticipates the later work of anthropologist Joseph Tainter, who reformulated the complexity problem into a new theory of social evolution. Tainter agrees that societies develop by identifying efficient solutions to problems, solutions that become incorporated into the structural frameworks of that society. However, as the problems and their respective solutions become increasingly complex over time, there is a strong propensity for an uneconomic cost/benefit pattern to emerge. The benefits of increased complexity may be significant but are more likely to be concentrated in the short term, while the long term costs become entrenched as a permanent feature of the society’s structural systems, resulting in diminishing marginal returns. (Constructing a primitive irrigation system or a nuclear power plant may likely result in immediate benefits that will decline for every dollar or unit of energy invested in maintenance, upkeep or other enhancements.) In Tainter’s view complex societies are likely to lose resilience and become increasingly vulnerable to unforeseen contingencies. Joseph Tainter, *The Collapse of Complex Societies* (Cambridge: Cambridge University Press, 1988). See also the analysis of Tainter’s theories in Thomas Homer-Dixon, *The Upside of Down* (Toronto: Knopf, 2006), 220-223..

³⁷ Adorno, Horkheimer and Tainter all owe an enormous intellectual debt to Max Weber, who first set forth the principles of growing social complexity and bureaucratization in landmark works published during the early twentieth century. Weber argued that Protestantism had essentially replaced Roman Catholicism in providing a scheme of ultimate social objectives (or final ends) that was highly conducive to the work ethos of capitalism (thereby repudiating Marx’s claim that ideological superstructures are rigidly bound by underlying economic factors). These multigenerational and longstanding religious commitments

In an analysis of the Adorno/Horkheimer position, Katerina Delgiorgi notes:

Adorno and Horkheimer describe instrumental rationality as a “dissolving rationality,” which cannot replace what it dissolves because it cannot be used for making rational decisions about final ends. As a result, the rationality of goals such as social freedom appears questionable and the domination of nature, which is seen as the means for achieving such goals, is transformed into an end in itself. This double assault on social and moral goals, their expulsion from the domain of reason and their translation into domination of nature, is not exclusive to the historical Enlightenment. It attests humanity’s antagonistic and ultimately self-destructive relationship to nature....

Adorno and Horkheimer frame their diagnosis in emphatically normative terms, insisting that reason ought to be more than instrumental. The closest they come to outlining their positive notion of enlightenment and of humanism is in their description of the utopian element of Kant’s conception of reason in terms of a “humanity which, itself no longer distorted, has no further need to distort.”³⁸

What the Enlightenment implicitly promised was the means to keep instrumental rationality in continuous accord with the rationality of final ends, and with this went the ability to keep theoretical science aligned with practical science, the means to balance the power of free markets with the power of scientific discovery. As modern technological society becomes increasingly complex, this normative dimension of rationality becomes increasingly important. “What you know” is no longer sufficient; “What you ought to know” is vital, for this creates a bridge for the utilization of risk analysis in the planning of future consequences on the basis of current states of affairs.³⁹ A society’s intelligible

are reinforced by what Weber describes as a “charismatic authority” of pastors, priests and religious texts that emphasize traditional values as a framework for addressing current problems. However, growing industrial complexity requires the increased bureaucratization of modern institutions and especially political institutions, which supersede traditional and charismatic sources of authority because of the pressing imperatives of modern social existence, which loses much of its value-orientation in favour of goal orientation. Modern man thus becomes increasingly trapped in a straightjacket of rational procedures that Weber describes as an “iron cage” which severely circumscribes his domain of action and moral behavior.

³⁸ Katerina Delgiorgi, *Kant and the Culture of Enlightenment* (Albany: State University of New York Press, 2005), 167 – 168.

³⁹ For a detailed analysis of the relationship of positive and normative economics relative to questions of rationality, see Daniel M. Hausman and Michael S. McPherson, *Economic Analysis, Moral Philosophy and Public Policy*, 2nd ed. (Cambridge: Cambridge University Press, 2006), 60 – 77. Benjamin Friedman puts this analysis in the context of a modern world that, pace Adorno and Horkheimer, has in fact faithfully carried forward the Enlightenment tradition and fully preserved (through the aegis of American capitalism)

objectives multiply and form networks of instrumentally linked goals. The rationality of these structural networks becomes as important as the content of the goals themselves. Given the accelerating pace of technological advance, the efficacy of risk analysis and probability forecasts becomes increasingly vital. The techniques and mechanisms for processing and managing the control of nature become increasingly unmanageable as Adorno and Horkheimer charge, and thereby narrow the mandate of human reasoning into a purely instrumental role. As a result, the possibility of effective risk analysis becomes more endangered.⁴⁰

These developments raise serious doubts about the Enlightenment paradigm and its twin assumptions of scientific rationality and the efficacy of market forces. Critics have now coined the term “disenlightenment” to describe an economic system now more subject than ever to conflicting pressures, paradoxes and dilemmas that are a

both the possibility and reality of moral progress. Benjamin M. Friedman, *The Moral Consequences of Economic Growth* (New York: Vintage Books, 2005), 19 – 51,

⁴⁰ That Enlightenment thinkers were themselves cautious about abandoning final ends in favour of a full commitment to instrumental rationality has long been the subject of scholarly analysis. The classical work on the subject is Carl L. Becker’s *The Heavenly City of the Eighteenth Century Philosophers* (New Haven: Yale University Press, 1932), which claims that the mainstream currents of eighteenth century thought were as deeply rooted in the a prioristic traditions of medieval scholastics as they were in forward looking scientism – the debates between rationalists and empiricists being another matter entirely. More recently, Mark Lilla, a humanities professor at Columbia University, has rejected a long established empiricist view advanced by Bertrand Russell and others that the rationality engendered by the Enlightenment carried forward into political and ethical thinking, making newly formulated concepts of the rights of man and separation of church and state virtually inevitable. Like Becker, Lilla claims that the religious perspective is essential to a comprehensive worldview, deeply valued by all civil society organizations since the eighteenth century and an essential dimension of the industrial and technological revolutions that followed. Mark Lilla, *The Stillborn God: Religion, Politics and the Modern West* (New York: Alfred A. Knopf, 2007). Nonetheless, an essential plank of Enlightenment thinking was still centered on the claim that the weakening of organized religion as the institutional authority of final ends meant that the responsibility for determining what is good for man had largely devolved to individuals in their “pursuit of happiness,” in the formulation of private projects for developing the virtues and capacities deemed ideal for individual agents. The critique of final ends as a social project was implicitly advanced by Hume with his famous claim that human rationality could no more privilege the scratching of one’s finger to the destruction of the world.

consequence of greater complexity, elements that undermine the capacity to acquire the knowledge necessary for continued economic development.⁴¹

Science, Complexity and the Problem of Uncertainty

The enlightenment is grounded on the view that science upholds truth and factual thoroughness as objective ideals. Scientific practice, however, is a work in progress that frequently falls short of the ideal of complete knowledge. While aspiring to and often held to very high standards of certainty, scientific enterprises must frequently make do with provisional findings, often with very serious consequences.⁴²

These circumstances have given rise to a new phenomenon, one that can be observed in conjunction with the growing complexity of modern science and technology: the power to act into markets and into nature; i.e., the power to alter the very constituents of the structural frameworks that make possible all scientific research and all free market activity. The central concern is that well-intentioned scientists and market agents may undermine the conditions of possibility that make their activities possible. This risk is particularly acute with regard to innovations, which are vitally necessary for meeting

⁴¹ The critique of Enlightenment should not be thought of as dividing analytic from continental philosophy. It has been noted that Adorno's program for social criticism has points of similarity with that of Sir Karl Popper. See Steve Fuller, *Kuhn vs. Popper: The Struggle for the Soul of Science* (Cambridge: Icon Books Ltd., 2006), 142 – 168. Important critiques of the Enlightenment heritage are also found in the works of postmodern philosophers such as Alasdair MacIntyre, Jean-Francois Lyotard and Richard Rorty, who criticized grand narratives and what they saw as the pointless pursuit of universal principles.

⁴² Joseph Tainter argues that with increasing technological progress goes increasing social and institutional complexity, such that new problems that emerge with this complexity become more intractable and more expensive to address, thus creating issues of diminishing returns for progress. The solutions for problems become more costly and quickly start to become problems in and of themselves. (See fn 14). Joseph Tainter, *The Collapse of Complex Societies*, *op cit*. Philosopher of science Nicholas Rescher comes to the same conclusion: "In natural science we are involved in a technological arm's race: with every 'victory over nature' the difficulty of achieving the breakthroughs which lie ahead is increased." Cited by Andrew Nikiforuk, *The Energy of Slaves* (Vancouver: Greystone Books, 2012), 171

imperatives of economic growth, but may also produce externalities that become manifest only in the long term, necessitating costly “ingenuity gap” solutions in the future.⁴³

What is at issue here is the way in which science and the inventions of science have created the capacity to alter the structure of markets as well as the structure of nature. The result, I propose to argue, represents a serious crisis point in the Enlightenment project because it means that the role assigned to markets and science by the enlightenment cannot be properly fulfilled. Two examples will illustrate the significance of this development re: acting into markets and acting into nature.

Acting into Markets: The Case of Long Term Capital Management (LTCM)

The possibility of “acting into nature” raises the question as to whether an analogue is possible for “acting into markets.” The former refers to processes by which the structural elements of nature (molecular frameworks, constitutions of atoms) can be altered in ways serviceable to human technology (e.g. nanotechnology, geoengineering, etc.). The possibility of “acting into markets” would be given by Goodhart’s Law (or Campbell’s Law), whereby social or financial indicators can become undermined and lose their utility as indicators if it becomes possible for private parties to act upon such indicators for their own benefit. In this section examples of “acting into markets” will be proposed and developed with respect to Long Term Capital Management (LTCM), a hedge fund that encountered severe distress late in 1998 and was rescued via a \$3 billion package provided by 11 financial institutions. Acting into markets in this case involves

⁴³ “Ingenuity gap” is a term coined by the Canadian academic Thomas Homer-Dixon in the 1990’s and is defined as the distance between the difficult and often intractable problems created by an advanced technological society and the solutions needed to correct these problems in a timely manner. (See the section on “Ingenuity Gap,” pages 43 - 45.)

alterations of market structures by LTCM that impacted the trading strategies of many other financial firms.

The proliferation of derivatives, options and other financial instruments in the 1980's made hedge funds more viable, and their numbers grew rapidly during the 1990's. The U.S. Securities and Exchange Commission identified 215 such funds in 1968 and increased its estimate to 3,000 by the beginning of the 1990s. They were generally immune from regulation until 2009. Hedge funds can be generally characterized by their lack of transparency (the need to protect their strategies from imitators or from strong predators willing to front run a weak fund) and the need for significant leverage to make their strategies profitable. For this reason, hedge funds were often closely linked to large banks able to provide financing and for which the funds could generate significant profits.⁴⁴ A hedge fund might well serve as counterparty for a bank's derivative transactions. For all of these reasons, hedge funds tended to restrict the flow of information to markets. Long Term Capital Management was a preeminent hedge fund and its demise, it will be argued here, was instructive with respect to the dangers of "acting into markets."

The specific circumstances of LTCM that merit explanation with respect to the concept of "acting into markets" will be summarized here and developed in more detail

⁴⁴ Business models for banks and financial institutions changed considerably during the 1980s and 1990s and these changes increased the importance of hedge funds as sources of profits for banks. Large corporations were increasingly able to generate their own funding internally and so were less reliant upon banks. As Savings & Loans gained more power to participate in commercial banking activities in the 1980's (in response to laws deregulating interest rates) they provided greater competition for banks and reduced their profit margins. U.S. regulators (who made commitments with respect to the solvency of large U.S. banks after the failure of Continental Illinois) agreed to allow commercial banks to draw as much as 25% of their revenues from investment banking activities. Increasing merger activity among banks and financial institutions, expanded activities in global markets and the growing role of derivatives all contributed to the need for banks to increase their alliances with hedge funds. Bank profits became increasingly dependent upon commissions and based less on interest earned. Banks became less dependent upon deposits as a source of funding and better able to develop alternative sources (shadow banking).

later when the history of LTCM is set forth. LTCM's central strategy was "convergence trading"; i.e., taking positions on two closely matched securities (e.g. U.S. Treasuries, one, say, for a five-year term, the other for a thirty year term). LTCM would go long on one security (bet that its value would increase) and short on the other (bet that its value would decline), and then close out the position when the value of the two securities converged as anticipated. During LTCM's short period of existence (1994 – 1998), this strategy was highly successful and the fund amassed over 38,000 of these paired investments. This success induced other investment firms and funds to copy this strategy. As a result of this increased competition, both the number of such trading opportunities and the margins available on these matched trades declined. To differentiate itself from these "copycats," LTCM was forced to innovate into new areas in which it lacked experience and/or expertise, such as equity volatility, interest rate swaps and paired equities. But in most of these trades, LTCM went long on the more illiquid or lower rated security

Thus, what can be described as "acting into markets" in the case of LTCM is a pattern of trading based less on the ultimate investment than on the structure of the investment itself, i.e., paired securities as the basis of convergence trading. This was done in such large volumes and supported by such large leverage from banks that the structures of these markets themselves became altered as more copycats mimicked the strategy. This created dangerous imbalances in these markets that became apparent during the global financial crises that affected Russia, Brazil and Asian economies in 1997 – 1998. These crises generated significant uncertainty in markets all around the world, such that the spreads on all of LTCM's trades did not converge, but widened

instead. The copycats closed out their positions more quickly than LTCM, thus causing spreads to widen even further and exposing LTCM to even greater losses. LTCM had diversified into more innovative trades to beat the copycats, but it hadn't gained true diversifications because it had created the same spread trade in all of these different markets. As one regulator noted, LTCM's trades were "correlated before the fact," and thus the fund was exposed to losses because of the danger that the correlations would go to one during the worldwide crises of 1997 – 1998. LTCM's positions were generally larger and more illiquid than others in the market, and this gave other financial institutions the incentive to trade ahead of LTCM's positions, further magnifying potential losses for the fund.

This exemplifies a phenomenon known as "reflexivity," a term coined by George Soros and one that will be examined in more detail later. Soros defines reflexivity as "a lack of correspondence" between the assessments of market agents and the actual states of affairs being evaluated, such that considerable uncertainties are generated, with the result that there is an even greater disconnect between evaluations and states of affairs. As *The Economist* notes in its explanation of reflexivity, "When funds [like LTCM] believe that diversification always pays, they all invest in the same exotic instruments. Diverse markets suddenly have something in common: the funds that have bought into them."⁴⁵

Such dangers are raised by the possibility of generating "uncertainty" in market circumstances with respect to agents who require the ability to undertake reliable risk calculations in order to function effectively in markets contexts. The distinction between "risk" and "uncertainty" was first set forth by Frank Knight in the 1920's and separated

⁴⁵ The Economist, "When markets turn," January 22, 2009.

unknown outcomes based on those that could be judged according to probability analysis and those which could not. Knight was concerned about the possibility of inefficiency and profits flowing to those who would not normally prosper in a competitive market. Friedrich Hayek would later elaborate the importance of information flowing freely to competitive markets, but by the 1990's and the rise of hedge funds like LTCM, the dangers of uncertainty were not primarily focused on market inefficiencies, but the dangers of destabilizing markets themselves. The danger of "black swan events," (i.e. unacceptable states of affairs that could not be tolerated even if the probability of occurrence was low) might increase in circumstances of greater uncertainty. Such possibilities have caused academics such as Hilary Allen to explore the possibility of invoking the precautionary principle as part of a comprehensive program for financial stability regulation.

The precautionary principle (PP) has long been associated with the environmental movement, but more recently has been applied to market activity as well. In its environmental applications, the precautionary principle applies to unacceptable hazards about which there is scientific uncertainty and for which burdens of proof are applied to those who wish to incur the possibility of the hazard. A more detailed discussion of PP can be found on pages 56 to 59 of this dissertation, but here it is very important to emphasize the distinction between PP and the prevention principle, which applies to condition of risk where there is no uncertainty about the nature of the hazard and/or the possibility of its occurrence. The PP applies to the case of finance as well because of conditions of uncertainty. Prof. Hilary Allen has made this case in response to the

conditions of the 2008 credit crisis and the legislative/regulatory remedies that followed.⁴⁶

In her analysis of Dodd-Frank legislation, Allen notes that cost-benefit analysis has become the basis for measuring the effectiveness of proposed new measures to deal with the financial crisis. This, in her view, has the effect of deterring proposed reforms if they impose immediate, short term costs on financial institutions and insufficiently discernible and/or quantifiable benefits can be determined. Thus, cost benefit analysis should be rejected in favour of precautionary standards, which would be more amenable to establishing or retaining the stability of complex financial systems. A burden of proof would thus be imposed upon the financial industry to establish that a specific reform or regulation is unnecessary. Thus, the precautionary principle itself could be adapted to apply to the context of financial markets and their regulation. There is a need to do so in order to prevent financial crises that are unacceptable because of the potentially devastating social costs that such crises may impose. It is impossible to prove that regulations that result from these applications of the precautionary principle will in fact succeed in curtailing future crises, but that should not be the basis for rejecting such regulation, even if short term costs are imposed upon the financial industry as a result.

Allen specifically cites uncertainty and the complexity of financial markets in her analysis, as well as the impact of “fat tail” events. Her analysis extends to new financial products and innovations that could potentially destabilize the markets, and here she does place the burden on financial institutions to initiate requests directed to regulators to

⁴⁶ Hilary J. Allen, “A New Philosophy for Financial Stability Regulation,” (173 – 231) *Loyola University Chicago Law Journal* vol. 45 (2013).

permit these new activities and/or products, rather than regulators “scrambling” to keep up with the institutions.⁴⁷

There are clear parallels that can be made with the case of Long Term Capital Management with respect to its use of derivatives, its occasions for “acting into markets” and the high risks of the illiquid trading positions it built. The precautionary principle could have been applied to LTCM in virtue of the systemic risks it eventually created, risks that did provoke a regulatory response when the fund was threatened with collapse. But Allen’s analysis does not merely advocate for specific precautionary actions or the prohibition of certain products that could have been applicable in the LTCM case. It also opens the possibility of self-regulation by institutions with respect to general rules or principles that could be aligned with the invocation of the precautionary principle. This possibility will be analyzed later in this chapter.

The genesis of LTCM can be dated back to the late 1970s and early 1980s, when increased interconnectedness of global markets tended to amplify volatility in foreign exchange and interest rates. This was particularly troubling for bond markets, which were generally staid and oriented to the long term and as such were well adapted to stable economic circumstances. Increased financial turbulence in global markets during this period created the demand for improved tools of risk management, and with it came innovations such as mortgage backed securities and junk bond financing. Financial firms on Wall Street adapted quickly to these changes and a new expertise on bond financing became an increasingly important part of the culture.

This new expertise was based on the increased importance of computer based modelling and mathematical calculation, since bond valuations (closely tied to interest

⁴⁷ *Ibid.*, 198.

rates and price correlations) can be reliably calculated and subjected to computer analysis. New analysts with Ph Ds in math could outperform those with long years of experience in traditional financial markets. New theoretical approaches such as the efficient market hypothesis and portfolio theory provided opportunities for improving market functions. Among the new methods that had been developed and put into practice was the Black-Scholes method, which provided a more exact measurement of the value of options through determinations of price volatility, rather than the traditional valuation that had been provided by markets themselves. Along with Black-Scholes came innovative new financial products, more sophisticated techniques for risk management and the rise of hedge funds that could put these products and techniques into practice.

A major test for the new methods and expertise came on October 19, 1987 during the crash of New York stock markets. The U.S. Federal Reserve provided the resources to bring markets back into line, but the panic was also characterized by rising bond prices as investors sought safety. A group of bond traders at Salomon Brothers headed by John Meriwether bet that bond markets would come back into alignment. (They shorted 30-year U.S. Treasuries believing that the liquidity premium had risen too high.) This “convergence trade” would become a hallmark of Meriwether’s trading group, as they became an increasingly profitable and indispensable center of Salomon Brothers. Bond financing was becoming increasingly important both domestically and globally (e.g. sovereign debt financing), and the group rose in prominence as a result as they gained more expertise in a diverse range of fixed income markets.

In February 1994 Meriwether and his group, having left Salomon, formed their own hedge fund, Long Term Capital Management. Building on their strong investment

record at Salomon after the 1987 crash, Meriwether was able to form a strong team of traders and partners who attracted strong interest from potential investors around the world. In addition to hundreds of millions received from private investors, LTCM also gained major institutional investors from Hong Kong, Taiwan, Japan, Kuwait, Germany, Switzerland and Thailand. Even Italy's central bank invested \$100 million. In its first four years of operation, LTCM achieved stellar results, increasing by 43% in 1995, 41% in 1996, and 17% in 1997. In 1996 the fund earned \$2.1 billion in profits, exceeding those of McDonald's, Disney, Nike and other highly regarded U.S. corporations. It had established strong relationships with several New York banks, which provided clearing services, connections and funding sources.

Its success was based upon a few key strategies. Convergence trading, noted earlier, was based on building trades when irrational incongruities built up in markets, with the belief that rational assessments would quickly return and bring markets back into equilibrium (if markets were sufficiently liquid, i.e., had daily trading activity that brought together a large number of traders who executed high transaction volumes resulting in minimal impact on asset prices; if markets were not sufficiently liquid, it might take considerably longer for markets to converge.) Convergence was an important trading strategy for trading positions based on offsetting securities, as LTCM's often were. High leverage was needed to exploit small irregularities identified through computer analysis to maximum benefit (although high leverage could present serious difficulties for positions that weren't sufficiently liquid). Diversification throughout numerous global markets was also considered critical, as well as the use of sophisticated,

computer driven analysis. Alliances with several banks provided stability and back up support.

Most notably, the fund had a strong theoretical foundation for its investment strategies, provided by two of its principal partners, Robert Merton and Myron Scholes, (both Nobel laureates and key players in the development of Black-Scholes), scholars who championed the ideal of efficient markets as the philosophical foundation for LTCM's trading strategies. Both were part of a general academic movement in economics and finance that emphasized the importance of free markets, general equilibrium, the use of mathematical models and greater scientific rigor. Black Scholes, Portfolio Theory, Capital Asset Pricing Model and the Efficient Market Hypothesis were all important achievements to which Merton contributed "continuous time finance," a dynamic method for modeling prices over short time periods, rather than in a snapshot.

Where Long Term Capital Management was concerned, Merton and Scholes emphasized an approach that focused on measuring and managing risk, while providing a limited role for accepting conditions of uncertainty. Well functioning markets assumed a normal distribution under which random events would collectively assume a rational pattern. As Roger Lowenstein states: "No one could predict any particular [price] change, but over a long enough period, they [Merton and Scholes] assumed that the distribution of all such prices would mirror the pattern of other random events like coin flips, [or] dice rolls...."⁴⁸ Once these price patterns were understood, risk itself could be effectively managed. Traders could alter the levels of volatility in prices by raising or lowering leverage, and thus volatility itself, once used strictly as a measurement tool of

⁴⁸ Roger Lowenstein, *When Genius Failed: The Rise and Fall of Long Term Capital Management* (New York: Random House, 2000), 66.

market activity, itself became a factor in that activity.⁴⁹ However because of their beliefs in market efficiency, Merton, Scholes and the LTCM traders believed that the securities of specific corporations had an inherent volatility that remained constant.⁵⁰

One particular flaw in this thinking was evident in the October 1987 crash itself, which had been the basis of belief in the Merton – Scholes approach. A strategy known as “portfolio insurance” was developed on the basis of the Black-Scholes method and involved limiting risk by increasing one’s short position in a stock (in which one was invested) as its price fell, if indeed the price started to fall. In normal markets dominated by rational agents (another key assumption of the Merton-Scholes approach) portfolio insurance was a reasonable way for investors to hedge their positions, but in turbulent markets portfolio insurance was not only ineffective for individual investors but dangerous for the stability of markets as a whole. The October 1987 crash seemed to show that uncertainty could descend upon markets with a vengeance, and thus methods like Black – Scholes could become inoperative when they were most needed. Portfolio insurance exacerbated the very damage it was designed to prevent by accelerating the amount of selling in a downturn and thus turning that downturn into a potential crash. The ideal that Merton and Scholes projected was the resilience of markets where rationality would always prevail and liquidity could never dry up. Indeed, it was highly ironic that John Meriwether and the other traders who would soon form LTCM believed very strongly in the rationality of strategies like portfolio insurance that aggravated the

⁴⁹ Black-Scholes was developed in the early 1970’s and was praised because it facilitated more accurate pricing of options based on the volatility of the underlying corporate share price. As options pricing no longer depended upon the judgments of traders and because it was believed that corporate stocks had a natural, inherent volatility, Black-Scholes contributed to the development of markets in derivatives instruments because of these beliefs in the reliability of pricing that Black-Scholes made possible. Yet LTCM traders believed that they could use increased or decreased leverage to raise or lower the level of volatility for a particular financial product.

⁵⁰ *Ibid.*, 68.

very irrationality that allowed them to profit through their own convergence strategies. What ultimately wrecked LTCM was a much different downturn in 1998 in which markets did not quickly revert to the norm as had been the case in 1987. Instead, to paraphrase John Maynard Keynes, markets stayed irrational longer than LTCM could remain solvent.

LTCM's particular difficulties with liquidity centred on the fact that much of their trading involved bonds and derivatives. Bond markets tend to be illiquid, derivatives even more so. LTCM's high degree of leverage compounded the difficulties since it escalated the danger that the fund might have to unwind complex derivatives positions under less than ideal conditions. Typically, market makers, banks or governments take responsibility for stabilizing turbulent markets for different types of assets, and this requires capital resources that can be quickly liquidated to buy up distressed assets. It is surprising that this danger was overlooked both by regulators and LTCM partners. As Chairman of the U.S. Federal Reserve, Alan Greenspan argued for complete elimination of margin requirements for derivatives transactions. As Roger Lowenstein notes, the basis for Greenspan's claim was always and inherently good because it bolstered 'liquidity'.⁵¹ Lowenstein goes on to note that after the collapse of LTCM, one of the fund's partners, Myron Scholes (of Black-Scholes fame) blamed "liquidity spreads" for the fund's problems, i.e., the premium that investors were willing to pay to reposition themselves into liquid assets (what Keynes termed "liquidity preference"). Lowenstein goes on to note: "Scholes lamented that academics and practitioners hadn't modeled this 'stress-loss liquidity component' and its implications for prices. But obviously,

⁵¹ *Ibid.*, 106.

illiquidity was merely the expression of the problem, not its cause.”⁵² The real source of the problem was the growing uncertainty in markets that was linked to financial and currency problems that were breaking out in a number of Asian nations in 1997 and continued into 1998.

The difficulties began early in 1998, after LTCM made the decision to buy out the bulk of its investors and concentrate its profits among its original partners and traders, a decision which significantly raised its already high levels of leverage. The fund then began to move heavily into trading equity volatility on the basis of the fund’s calculation that markets were overstating anticipated volatility for a range of stocks on a given index like the S&P 500. Thus, LTCM began to massively short the options of stocks traded on this exchange, in the belief that the price of these options would fall once greater rationality began to prevail in the markets. Once again, the LTCM traders believed in the possibility of managing volatility while at the same time believing that underlying securities, i.e., particular stocks in the index, had a natural and inherent level of volatility.

LTCM developed this market very aggressively through specialized private option contracts that it sold to J.P. Morgan and a number of other brokers and investment firms. There was a strong demand from these firms that were willing to “buy volatility,” to use Roger Lowenstein’s expression, but very few like LTCM willing to sell it. Because LTCM believed in this product so strongly, it soon dominated the market, accounting for a quarter of the trade in equity volatility. Once again, LTCM relied upon meticulous computer calculations of the history of price volatility and options trading, coupled with its belief in the inherent stability of markets and their power to return to rational states of equilibrium based upon the inherent stock price volatility of individual

⁵² *Ibid.*, 228.

corporations. However, this ignored the fact that structural elements in these markets were changing as well.

These structural transformations can be exemplified in the case of J.P. Morgan, which was a major buyer of equity volatility. In 1997, just before LTCM became an aggressive seller of volatility, J.P. Morgan began its pioneering work in developing synthetic CDO's (collateralized debt obligations). At the time J.P. Morgan was looking for ways to reduce its capitalization requirements, as well as create new uses for credit default swaps, a product it had recently developed for use by Exxon in protecting itself from liability stemming from the Exxon Valdez disaster in 1989. The synthetic CDO tied together hundreds of credit default swaps linked to Morgan's corporate borrowers, thus allowing Morgan to take hundreds of millions in credit risk off its own books, and thereby reducing its own capitalization requirements. Moreover, this deal helped Morgan develop a tradable market for credit default swaps, and developing such a market would allow traders to make their own judgments with respect to the default risk for particular corporations. However, trading in such products could also increase speculation in the potential for default and thus possibly induce large movements in the stock prices of corporations themselves. Thus, the possibility of "inherent volatility" which had been an important basis for LTCM strategies began to seem more dubious, and volatility could in fact be induced by structural factors in the markets themselves, factors which J.P. Morgan had introduced on the basis of very rational, profit seeking objectives. Therefore, what LTCM took to be irrational overpricing of options was nothing of the kind, but was instead the result of a structural evolution in market practices. But more to the point was the fact that a market crisis could induce "irrational" price movements that would not be

temporary, but would stay out of alignment for extended periods. This was a possibility that LTCM had not anticipated.

By May 1998 increasing instability in far eastern markets – Indonesia, Thailand, South Korea, etc. – led to a general retrenchment on Wall Street, a flight to quality and a greater aversion to risk. Credit spreads did not contract as LTCM had anticipated, but instead began to widen. The firm had built significant trading positions not just in equity volatility, but in many other strategies which covered interest rate swaps, arbitrage and many other investments in developing nations, most of which moved against LTCM. What is surprising from accounts of the fund’s crash such as Roger Lowenstein’s is the fact that its traders had no apparent sense of danger and no motivation to exercise precautions; rather, they expanded many of their positions, seeing tremendous opportunities, even as the markets continued to move against them. The danger was compounded by the fact that many of the trading positions they were building were highly illiquid, meaning they would be very difficult to unwind as the markets worsened and their capital decreased, problems aggravated by the fact that LTCM was already highly overleveraged. Their presence in some markets became so large that in essence they became the market. Or, as Roger Lowenstein put it: LTCM “got so big that it distorted the very markets on whose efficiency the firm relied.”⁵³

The collapse of LTCM itself unfolded very quickly and can be dated from the onset of the Russian financial crisis on August 17, 1998 to the actions initiated by the New York Federal Reserve to orchestrate a takeover of LTCM in late September. During that 6 week period, the fund lost \$3 billion or almost 90% of its value. However, this rapid decline was presaged by LTCM’s failure during the May to August period (when it

⁵³ *Ibid.*, 234.

lost a third of its equity) to grasp the magnitude of the dangers it faced. Many Wall Street financial firms were in full retreat from the markets in which LTCM traded heavily, in effect selling out of the positions in which LTCM was invested. The fund's managers saw this as a temporary situation and fully expected other traders to move into these positions as rationality returned to the market. Again, this was part of the LTCM philosophy that equilibrium built up around certain positions around which prices fluctuate and to which market dynamics would always return. What was not anticipated was the fact that trading in bond markets would dry up during the six week period from mid-August until the end of September and thus liquidity vanished. This made it extremely difficult for LTCM to reduce its own positions because they were so illiquid. Adequate liquidity is assumed in standard finance theory, and the conditions of uncertainty that prevailed in global markets during that six week period were not predicted by the models used by Alan Greenspan's Federal Reserve, given Mr. Greenspan's own beliefs that the derivatives based financial strategies being used by LTCM and other firms were allocating risk more effectively in global markets.

What LTCM's own models failed to anticipate were rare situations or event clusters that could dramatically impact markets. According to their models, such events or "fat tails" are so rare as to be not worth considering. They would also reduce bank profits, given the need to hold increased levels of capital. But other market analysts such as Nassim Taleb have described the dangers of such "black swan" events and the rapid transition of circumstances under which these can occur.⁵⁴ Thus, situations governed by normal distributions and risk calculations can be transformed into conditions of

⁵⁴ Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007).

uncertainty under which prices do not rapidly revert to norms and markets can remain irrational for long periods of time. LTCM was very rapidly undermined by its own strategies. Once its convergence strategies failed and its computer analysis failed to make allowances for rare events, its other strategies reversed field as well. Its massive leverage (which reached levels of 100 to 1) became a source of danger rather than strength as its capital declined. Its diversification strategies failed because all the markets in which it was invested were impacted by the events of 1998. Although LTCM had a formal strategy for risk diversification (investments in different types of bonds in different jurisdictions), its central strategy in all these markets was essentially the same. Thus, the correlations went to one, or as Roger Lowenstein noted, it is possible that “eggs in separate baskets break simultaneously.”⁵⁵ Its reliance upon on Black-Scholes failed.⁵⁶ Perhaps most disturbing of all is the fact that its relationships with its banks deteriorated very rapidly, with Bear Stearns threatening to withdraw its clearing services. LTCM had to appeal to banks such as Goldman Sachs to provide it with the financing it needed to cover its distressed trading positions, and in exchange LTCM lost the secrecy it had needed to build successful trades in the first place. As outsiders gained increasing knowledge of LTCM trading positions they initiated new trades to undermine the fund’s already weak positions and thus hasten its slide into insolvency. It is at this point that the dangers of “acting into markets” can seem particularly acute.

⁵⁵ Roger Lowenstein, *op cit.*, 233. “LTCM fooled itself into thinking that it had diversified in substance when, in fact, it had done so only in form.”

⁵⁶ The French mathematician Benoit Mandelbrot describes his own experience visiting the Citigroup trading area in Canary Wharf London in 2003. He notes traders studying the “volatility surface” of options markets. According to Mandelbrot, the price fluctuations being studied are not possible under Black-Scholes. Benoit Mandelbrot, *The (Mis)behaviour of Markets: A Fractal View of Financial Turbulence* (New York: Basic Books, 2006), 81.

As other players in the market gained knowledge of LTCM's trading positions, they began to liquidate those positions in front of the fund in the hopes of making huge profits, thus making it far more difficult for LTCM to unwind its already very large and very illiquid positions. Complicating matters was the fact that there were only four or five other institutions dealing in equity volatility with which LTCM could execute the complex trades it needed to unwind its positions, and none of them were in any hurry to ease the fund's distress. Other Wall Street firms needed to exit from similar if smaller positions than LTCM. It thus quickly became apparent to regulators that LTCM's failure could have huge destabilizing effects on the market, and the New York Fed moved to orchestrate a rescue.⁵⁷

The Fed's principal worries centred on the possibility that an LTCM default on one or more of its derivatives contracts could trigger a cascading effect of linked defaults. While the counterparties were protected by their collateral holdings on these contracts, there was the possibility of numerous holders trying to realize on the value of these collateral holdings simultaneously, thus driving down their value. Simon Johnson and James Kwak point out that LTCM marked the first time that a fund with a global presence could bring financial contagion into the U.S. itself. What singled out the crisis, in their view, was the rapid response of regulatory authorities, who showed "that any damage could be contained through effective intervention and sound macroeconomic

⁵⁷ The rescue by the Federal Reserve was controversial for a number of reasons. It had no authority to regulate hedge funds, and its coordination of the rescue was unusual for many reasons. The banks themselves were in a difficult position and held conflicting motives. Their traders were trying to profit by undermining LTCM's positions but at the same time they were all risking severe difficulties if the fund failed. Most of them were facing their own losses in turbulent markets apart from their relationships with LTCM. The Fed thus had to insist that all the banks participate in the rescue because of the free rider problem that would benefit non-participants. The rescue also had to proceed very rapidly because LTCM's positions were deteriorating so quickly.

management, without requiring taxpayer money or slowing down the real economy.”⁵⁸ Indeed, the New York Federal Reserve Bank persuaded 11 banks to contribute \$3.65 billion needed to save LTCM without the need for any taxpayer bailout.

The banks themselves had strong incentives to participate in the rescue. They realized that no one bank could take over the fund on its own without being targeted by the same weaknesses and threats of other parties trying to undermine the fund’s position. It had to be a collective effort. Moreover, it was clear that LTCM presented the risk of systemic failure, with the possibility of a rapid and disorganized sell off of collateral having a severe impact on broader financial markets and perhaps the economy itself. An unregulated hedge fund could thus severely impact the regulated banks that had supported it. At the time it was difficult to speculate on this possibility because of the uncertainties involved – a real time occurrence of systemic failure would have to wait until the 2008 crisis – but regulators and bankers appreciated the need for precautionary efforts, even if only after the fact. Indeed, Roger Lowenstein makes the important point that regulators should have been focused on preventing the LTCM disaster in the first place, with the preventive responsibilities assigned largely to the banks that provided very generous credit accommodations, clearing services, etc. in the first place. Regulators should not have waited until after the fact to worry about preventing a systemic meltdown in financial markets. As he notes: “The government’s emphasis should always be on prevention, not active intervention.”⁵⁹ This raises the question as to

⁵⁸ Simon Johnson and James Kwak, *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown* (New York: Pantheon Books, 2010), 54.

⁵⁹ Roger Lowenstein, *op cit.*, 231. Financial academics like Andrew Lo worried that hedge funds were creating instability on the basis of the fact that increasing numbers of funds were requiring increasing leverage to chase down declining numbers of opportunities. See also Thomas Donaldson, “Hedge Fund Ethics,” (405 – 416) *Business Ethics Quarterly* vol. 18, no. 3, (2008). Donaldson specifically raises the point about the systemic nature of hedge funds that leads to the restricted flow of information to markets.

whether or not the precautionary principle should be applied in cases of finance as well as those of environment.

The dilemma is clearly a difficult one, given the earlier point that banks did begin to rely upon hedge funds to boost their profits as their business models began to change. But Roger Lowenstein sees this as the root of the problem. In his view the banks provided credit accommodations that were far too generous, given the levels of risk involved. The bankers should have known that LTCM was dealing with many banks and thus no one institution was aware of LTCM's overall risk profile.⁶⁰ Generating increased profits from commissions was what mattered to the banks, and the result was declining credit standards. Such declining standards clearly did not cohere with the regulatory approach of the Federal Reserve under Alan Greenspan, which was based on the belief in self-regulation, that the banks themselves had strong incentives to monitor their own risks. However, there was no exercise of the precautionary principle (as described earlier by Hilary Allen) or even of basic precautions in the face of growing uncertainty in global markets. Indeed, LTCM's growing positions in equity vol. were generating increasing risk as market conditions continued to deteriorate. Other market agents were replicating some of the fund's basic strategies (the copycat problem) and this incentivized LTCM to innovate in risky ways.

The underlying financial philosophy and trading strategies of LTCM were based on the belief that such precautions would never be necessary. As noted earlier, Robert Merton's theories, based on Black-Scholes, the efficient market hypothesis and other core beliefs from financial theory, had provided the theoretical and conceptual foundations from which LTCM trading strategies had been developed. These beliefs in free markets

⁶⁰ *Ibid.*, 232.

as fundamentally stable and constantly moving toward equilibrium had excluded any need to consider scenarios under which normal distribution would not hold and thus when the possibility of black swan events or fat tails would have to be considered. On this view, markets always represented conditions of manageable risks, never conditions of uncertainty. Merton and Scholes had been awarded the 1997 Nobel Prize for Economics and both had worried about the impact of the LTCM failure the following year on their own academic reputations. Perhaps for this reason, both tried to justify the failure by blaming market conditions rather than any shortcomings in their own theory.⁶¹

Important criticisms of Merton and Scholes came from both Nassim Taleb and his Black Swan theory noted earlier, and from George Soros. Taleb emphasized the importance of recognizing when conditions of uncertainty (and thus the logical possibility of black swan events) prevail in markets, i.e., when exceptional conditions have to be considered over normal conditions.⁶² This is due to Taleb's belief in failures of judgment that can be traced back to failures to exercise second order thinking, or what Taleb describes as failures to recognize "metarules," such as "the rule that we have a tendency not to learn new rules," and so "we do not spontaneously learn that we don't

⁶¹ Merton had argued that financial markets were roughly comparable to conditions of random distribution of particles in physics, and thus while individual events could not be predicted, overall patterns could. On this view risk in markets could be predicted along the lines of dice rolls or actuarial calculations. Roger Lowenstein notes that an important flaw in this approach is the fact that while dice rolls are independent of each other, events in the market are not. "Prices and spreads vary with the uncertain progress of companies, governments and even civilizations. They are no more certain than the societies whose economic activity they reflect. Dice are predictable down to the decimal point; Russia is not; how traders will respond to Russia is less predictable still." (Lowenstein, *op cit.*, 235.) Nonetheless, Merton's solution to the LTCM failure was "to design ever more elaborate and sophisticated models. The notion that relying on any formulaic model posed inescapable risks eluded him." (220). LTCM traders similarly blamed the irrationality of market conditions rather than any strategic failures by LTCM. John Meriwether and his traders went on to form JWM Partners, which absorbed losses as high as 44% in some of its funds during the 2007-2008 financial crisis.

⁶² Nassim Taleb, *op cit.* Taleb directly criticizes Merton's belief that option traders have to rely upon rigorous economic theory in order to trade, noting that this is like "[asking] birds to study (bad) engineering in order to fly." (282).

learn what we don't learn."⁶³ We thus completely fail to recognize the transition from conditions of risk into those of uncertainty. George Soros also provided a philosophical basis for his criticisms of free market theories like Merton's, and he too placed a strong emphasis on conditions of uncertainty in markets.

The basis of Soros's theory is "reflexivity," or the claim that market agents have dual functions: a cognitive function and a manipulative function. The former represents efforts of agents to understand the world as it is; the latter is the attempt by agents to alter it to their own benefit. In Soros' view, there is a lack of correspondence between these two functions, thus leading to conditions of uncertainty in markets.⁶⁴ Such agents are thus not rational and the world of markets is thus not one that is comparable with cause and effect phenomena in the physical universe, as Merton believes. Such agents allow their own interests to distort the view of the reality they need for a strong cognitive understanding, and these distortions in turn will lead to new errors in their pursuit of their own interests. Uncertainty is thus inevitable in market conditions, which in Soros's view are characterized by inherent instability, not the stability of equilibrium ascribed to by Merton and Scholes (which Soros claims must be false if his own theory of reflexivity is true⁶⁵). Thus, Soros is led to criticize the efficient market hypothesis and other fixtures of finance theory, noting that rising prices themselves in given markets can be the cause of further rises in price.⁶⁶

⁶³ *Ibid.*, xxi.

⁶⁴ George Soros, *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What it Means* (New York: Public Affairs, 2008), 3-11. Soros claims Sir Karl Popper as the source of his philosophical inspiration, but he also draws upon Bertrand Russell's theories of paradox, as well as Russell's distinction between theoretical science and applied science.

⁶⁵ *Ibid.*, 23.

⁶⁶ *Ibid.*, 55.

The case for uncertainty in markets made by both Taleb and Soros thus aligns with their claims for what Soros describes as “the inherent instability of markets” and the dangers that can be posed by agents who have the power to “act into markets.” In such cases, markets cannot be left to their own devices, to clean up the problems created by markets themselves. In such cases, preventative activity and also interventions into markets may be required. The case of LTCM is one in which growing uncertainty and instability in markets did not result in greater precautionary efforts being exercised. Indeed, the opposite occurred, as the hedge fund increased its risk profile even as it was being overwhelmed by external events in the market. The responsibility for the fund’s failure rests with banks and regulatory authorities, as well as with the fund itself. At all levels, basic preventive steps were not taken, i.e., measures to control risk and reduce uncertainty in the face of clear and present dangers. Exercises of the precautionary principle would thus seem to be even more imperative, given the failures of preventive actions during a crisis. This is the case that was made by Hilary Allen in her analysis of regulatory reform in the aftermath of the 2008 crisis, thus indicating that regulatory responses after the global crises of 1997-1998 (including the LTCM crisis) were not satisfactory. A similar review of the precautionary principle in scientific contexts is now required with respect to “acting in nature.”

Acting into Nature: The Nature and Structure of Scientific Knowledge

Analogous to the capacity to act into markets is the capacity to “act into nature” and its economic significance is described most graphically by the German-American philosopher Hannah Arendt. Ironically, Arendt’s central concern was not focused on

science or industry at all, but on Vico's understanding of historical processes, which humans both "make" as directly engaged actors and study as scientists. Arendt points out that this process changed in the twentieth century when cutting-edge scientific experimentation lost its traditional objectivity.⁶⁷ For Arendt, the contrast between history and the physical sciences has evaporated because science has given us the power to directly alter the fundamental constitution of our physical environment, something once only possible with our social and political interactions: "We can do in the natural-physical realm what he [Vico] thought we could only do in the realm of history. We have begun to act into nature as we used to act into history."⁶⁸

Arendt distinguishes three distinct phases in this process. In the first, human beings align their inventions directly with natural forces: a sailing ship makes direct use of wind power; a mill wheel makes direct use of rushing water. In the second phase human beings manipulate natural forces in order to magnify their effect. The steam engine and internal combustion engine concentrate existing natural processes to create new ones not found in nature. Although negative externalities (pollution) are created, there is no alteration of molecular or atomic constituents of natural forces or entities.

This is exactly what happens in the third phase when science goes beyond the splitting of the atom into new domains of investigation, such as genetic modification or molecular reconstruction. The development of nuclear weapons and nuclear energy has been considered one of the most significant scientific achievements, but this is primarily

⁶⁷ Arendt's point relates to Vico's concern with man's own creative involvement in the subjects he studies. Hence history is of great importance but botany less so because we don't create the plants we study. But twentieth century physics would be different because of quantum mechanics. By measuring we change or influence the very things we are trying to measure. This was noted in finance with respect to the Black Scholes model, which on the one hand seeks to establish the pricing of options by measuring volatility, but on the other hand can generate the very volatility it seeks to measure.

⁶⁸ Hannah Arendt, "The Concept of History: Ancient and Modern," (278 – 310) in *The Portable Hannah Arendt*, Peter Baehr, ed. (New York: Penguin Group (USA) Inc., 2000), 292.

a second stage activity, given that to some extent it replicates existing natural processes such as the atomic reactions that generate light and heat in the sun. (Third stage effects are largely derivative, in that uncontrolled or unanticipated alterations of subatomic structures may occur as a secondary consequence.) However, there are purely third stage scientific enterprises, and these have been only been developed during the last thirty years. Biotechnology encompasses recombinant DNA, which gives us the power to alter the genetic structure of organisms to produce new vaccines and new forms of genetically modified foods. Nanotechnology has enormous potential to create profound benefits through subatomic alterations, but carries tremendous risks from the possibility of self-replicating nano-organisms. At a more down-to-earth level, the development of synthetic chemicals (e.g., fertilizers and pesticides developed from petroleum-based compounds) during the 1930's and 1940's yielded important economic benefits, but also resulted in proliferating rates of cancer and other diseases. The transition from the second to the third phase, into the processes of "acting into nature," carries with it tremendous risks that we may not be able to identify, much less understand or control, i.e., potential externalities at the time new technologies or scientific processes are developed. With respect to biotechnology, David Oppenheim and Robert Gibson observe:

A central fear is that genetic engineering applications will take us from manipulating nature in the human interest to severing our link with what is natural, both in ourselves and in life around us. Biotechnology's critics argue that we must at least assess the implications of altering the basic building blocks of life and consider whether we should limit biotechnology on the basis of an ethical judgment that exerting so much control over the biological commons would take us beyond our proper role in the ecosystem. ***If we view our relationship to the surrounding world as being within rather than apart from the ecosystem, then perhaps we are bound to observe a degree of restraint.***⁶⁹ (Emphasis mine.)

⁶⁹ David Oppenheim and Robert Gibson, "Ethics For New Life Forms: Applying the Precautionary Principle to the Regulation of Biotechnology," (101 – 116) in *Canadian Issues in Environmental Ethics* Alex Wellington, Allan Greenbaum and Wesley Cragg, eds. (Peterborough: Broadview Press, 1997), 103

The concern is not with irresponsible or nefarious uses of science, but with real difficulties in understanding the moral significance of actions governed by scientific and economic imperatives in pursuit of an Enlightenment goal of human progress. Science, with unfettered freedom to invent and experiment, powered the commercial era of the fifteenth and sixteenth centuries into the industrial era of the nineteenth century. With the industrial age came prosperity and economic efficiency. However, the industrial age also brought problems of its own that themselves required the application of scientific methodologies in order to achieve real solutions. With these developments, science completed the transition from stage one to stage two as described by Arendt.

At this second stage, manipulating the forces of nature requires the advance of scientific theory, which in turn necessitates a greater social commitment to scientific education and institutionally funded experimentation. Business interests assume a greater burden for funding research and development, and scientists find themselves directing their priorities towards solving problems generated by the application of science to economic development, as well as locating the sources of future profitability. This has resulted in countless examples of “spin-off” and secondary product development such as computers and calculating machines that originated in punch card systems needed to

– 104. It is interesting that this perspective is alien to certain ethnocentric stances in Pragmatism, which reject the possibility of such dual perspectives both with respect to nature and with other cultures. Cf. for example, Hilary Putnam, *Realism With a Human Face* (Cambridge, Mass.: Harvard University Press, 1990), 178 and Richard Rorty, “Method, Social Science and Social Hope,” (191 – 210) in *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982). If Pragmatist communities are to be understood ethnocentrically and notions like scientific method/objectivity are to be abandoned, then there is a continuity between scientific discourse and other discourses, and our technological discoveries simply open new domains of positive possibilities without any unpleasant dilemmas that force us to consider the alternatives of aligning the sustainability options of communities with natural systems. By contrast with Pragmatism, a perspective based on the possibility of acting into nature takes into account the difference between acting within a given system and altering the systemic components that make that system possible. As Reinhold Niebuhr once noted, the loyalty granted to a community or a nation “is therefore morally tolerable only if it includes values wider than those of the community.” Reinhold Niebuhr, *The Irony of American History* (New York: Charles Scribner’s Sons, 1952), 37.

register and track U.S. immigrants in the nineteenth century (which in turn can be traced to punch card systems used in textile looms). Nikola Tesla's efforts to develop wireless electrical transmission which in turn lead to the development of radio provide yet another illustration of this process. Spin-offs exemplify the way in which highly profitable products may come into existence through accidental or secondary discovery, and thus carry little in the way of development costs.⁷⁰ However, such cost savings do not spur industrial efforts to investigate the full panoply of social costs.

As scientific development progresses in stage two toward the power to "act into nature," a gap opens between "feasibility costs," that is the costs required to develop and bring to market functional products that fulfill a market need,⁷¹ and "social costs," that is to say, the full internal and external costs required to develop and use these products over their life spans. Product development, however, cannot be impeded because economic imperatives dictate that we bring new products to market in order to generate the prosperity and growth needed to spur investment and its promise of ongoing profits in the immediate term. On the other hand, the dangers of externalities in the long run become more acute as human powers both to manipulate nature and to "act into nature" become more sophisticated. Even more significant, however, is the additional fact that the nature

⁷⁰ As noted earlier (see fn 11), Western governments (and especially the U.S. government) have provided a high degree of research into areas of theoretical sciences and absorbed an extensive level of R&D costs, for which the private sector reaps significant benefits. For an analysis of these issues see Mariana Mazzucato, *The Entrepreneurial State* (London: Demos, 2011).

⁷¹ I have used the term "feasibility cost" as opposed to the standard "private cost" used in economics. The former reflects a hypothetical dimension of new product development that includes ideas rejected because projected returns may not equal anticipated costs. "Feasibility cost" is thus a broader term and is intended to include opportunity costs posed specifically by the extensive deliberation and planning by entrepreneurs, managers or executives in anticipating product demand derived from new technologies, as well as the technological means of meeting such demand. Such costs may not be sufficiently captured in calculations of production function. Thus, the point of using this term is to emphasize the extent to which deliberations of this sort crowd out potential considerations of unanticipated (and possibly catastrophic) social costs.

of these externalities is such that they cannot in practice or increasingly in theory be predicted and therefore their effects can neither be effectively costed or mitigated.

In the normal course, it would be prudent to insist that manufacturers invest in a certain degree of regression testing. Thus, when new ways of manipulating or acting into nature are discovered, we would conduct tests to determine how our alterations of natural processes impact existing processes, ensuring that the sustainability of natural forces is preserved. But such regression testing is impossible when the new methods of acting into or manipulating into nature are so complex and sophisticated that an endless domain of possible consequences is created, consequences that are both unanticipated and incapable of being anticipated. The science of studying greenhouse gas emissions did not exist at the time automobiles were developed. CFC's were synthetically developed long before the possibility of ozone depletion could even be conceived.⁷² Standards of regression testing, even if they could be developed, would thus generate unreasonable and impossible expenses for manufacturers. From an economic standpoint, we cannot prohibit technological innovation in a modern economy on the basis of externality costs that cannot be determined in advance.⁷³

⁷² CFC's, chlorofluorocarbons, represent a classic case of scientific innovation that entails aspects of both "manipulating" and "acting into nature." CFC's are artificial chemical compounds created by industrial chemists in the late 1920's and used for refrigeration, air conditioning and Styrofoam production. Their connection to ozone depletion was not discovered until the late 1970's and before the negative effects of ozone depletion were fully understood. Stratospheric ozone studies were established and funded in the late 1940's as a matter of pure scientific research, with no knowledge of any possible externalities. It was purely a matter of cost efficiencies that caused chemists to use chlorine rather than bromine as an industrial compound in CFC's. (Bromine would have accelerated ozone depletion at a catastrophic rate.) The Montreal Protocol of 1987 banned the use of CFC's, but succeeded in large part because of the overall cost benefits it created for the companies involved in its production. (The companies in question, principally DuPont, had originally launched public relations campaigns against the initial scientific links between CFC's and ozone depletion.) For a more detailed account, see Tim Flannery, *The Weather Makers* (Toronto: HarperCollins Publishers Ltd., 2006), 213-221.

⁷³ This captures the distinction between the precautionary and proactionary principles noted earlier.

Externalities now begin to distort standard market mechanisms that lie at the basis of assumptions that market forces will ensure that the pursuit of private interests will generate public benefits. If the full costs of product development and use, i.e., social costs, are not factored, then these products are no longer accurately priced by free markets and resources are no longer efficiently allocated – or, more accurately, a gap is created between the short term and long term measurements of costs and benefits. When long term costs associated with the application of scientific advances to the production of goods and services eventually appear, the products may have become well entrenched in the market and intricately connected with existing distribution and supply chains, corporate profitability and/or the economic wellbeing of specific communities. As British philosopher Alfred North Whitehead once noted: “It may be impossible to conceive a reorganization of society adequate for the removal of some admitted evil without destroying the social organization and civilization which depend on it.”⁷⁴

“Acting into nature” represents a necessary, inevitable stage of scientific advance, one that takes mankind to remarkable levels of technical sophistication. However, it is also one that because of equally necessary and inevitable economic imperatives reduces the level of control that human beings can effectively exercise over the entire process. We are compelled by economic pressures to maintain our existing level of prosperity by maximizing investment opportunities, and this means going forward with new inventions and processes made possible by our capacity to manipulate or “act into nature,” even though we may have no grasp of what their ultimate externalities might be and how

⁷⁴ To which Whitehead added: “An allied plea is that there is no known way of removing the evil without the introduction of worse evils of some other type.” Cited by Andrew Nikiforuk, *op cit.* 19.

costly they may become.⁷⁵ Economic pressures in the modern global economy are of such a nature that we may be forced to accept a principle of double effect in cases where we do understand the potential negative impacts of externalities. (We anticipate negative impacts but do not intend them.) “Acting into nature” actually accelerates this process because our ability to alter the subatomic constitution of matter may produce externalities with a far more immediate impact than those created by the manipulation of nature, which often require several decades to make their negative consequences known.

The Ingenuity Gap

This gap between serious externalities and the imperatives of addressing them has been noted by Thomas Homer-Dixon, who coined the term “ingenuity gap” to describe the growing range of problems created by modern technological societies and disasters that may ensue if highly qualified technicians do not solve these problems in a timely manner. As Dixon notes: “We certainly have it in our power to produce widespread prosperity and justice on this planet. But it is not at all clear that we will use this power properly. When we look back from the year 2100, I fear we will see a period when our creations – technological, social and ecological – outstripped our understanding, and we lost control of our destiny.”⁷⁶ The possibility of closing this “ingenuity gap” will become less likely with our increased powers to “act into nature,” if our ability to alter the basic

⁷⁵ Some economists have taken up the idea of a qualitative assessment of GDP expansion, as in the concept of “uneconomic growth” championed by Herman Daly and Marilyn Waring. Growth can be “uneconomic” if GDP increases are accompanied by a decline in human well being, as measured by human development factors or by human “capacities” as formulated by Amartya Sen and Martha Nussbaum. More famous is “Limits to Growth,” the 1972 Club of Rome report that projected future impacts of population growth and resource depletion. This work was sharply criticized at the time by mainstream economists such as Robert Solow for lack of empirical evidence; however, its main themes have won more widespread acceptance.

⁷⁶ Thomas Homer-Dixon, *The Ingenuity Gap* (New York: Vintage, 2001), 8.

constitution of matter produces negative externalities that become manifest more quickly than those created merely by our power to manipulate natural processes.

What Homer-Dixon describes is the possibility of the ultimate failure of the Enlightenment Project. As noted earlier, the Enlightenment's enshrinement of scientific reason should result in greater control of human affairs at all levels, in business, politics, economics, the environment and justice. We fail to achieve such control because we are compelled by the imperatives of economics to use our power to act into nature for the purposes of ensuring continued economic development. However, we lack the resources to fully study or understand the effects of nature-altering economic activities. We cannot do all the regression testing necessary to ensure the sustainability of natural processes under the altered conditions we have created, and we often have no idea (as in the case of ozone depletion) what these ultimate effects are likely to be when we license a particular industrial product or process. This would seem to lead to the conclusion that scientific processes themselves do not create structural or institutional guarantees that will ensure that subsequent economic activities undertaken to maximize prosperity will produce uniformly beneficial results.⁷⁷

I will argue in subsequent sections of this dissertation that the problems generated as a result of the capacity to "act into nature" can be successfully addressed only through the exercise of what Kant described as pure practical reason, although it is not clear at

⁷⁷ This line of thinking has been advanced by John Ralston Saul towards the conclusion that an advanced technological civilization becomes more vulnerable to a growing lack of awareness of its own structural shortcomings, in large measure because its governing ideology is too deeply embedded in these structural frameworks. John Ralston Saul, *The Unconscious Civilization* (Toronto: Anansi Press, 1995). Alon Kadish outlines a similar process in his discussion of the history of economics as an academic discipline, which in Kadish's view became increasingly detached from economics, as this discipline sought to become more self-sufficient as a social science and with a greater foundation in mathematical and empirical evidence and justification. In Kadish's view, the evolution of economics as a discipline is essential to its own self-conception. Alan Kadish, *Historians, Economists and Economic History* (London: Routledge, 1969).

this stage of the argument how moral reasoning can be privileged in cases where there is very little chance of anticipating possible consequences.

The problem of “acting into nature” thus raises important problems for the Enlightenment paradigm. The ingenuity gap generated by the interaction of science and economics, that is to say the difficulties of doing all the regression testing needed as a result of the power to act into nature means that we become dependent upon the contingency of random events that are the result of human choices and over which we can only exercise limited control. Business historians have documented periods since the onset of the industrial revolution where unanticipated events have spun out of control or created unforeseeable consequences for which there was little time to adequately prepare. The Great Depression of the 1930’s is one example.⁷⁸ But recent work by geologists, environmentalists, economists and political observers (works that date from the late 1960’s and early 1970’s – *The Closing Circle*, *The Population Bomb*, *The Report to the*

⁷⁸ The standard view of mainstream historians emphasized a combination of factors related to the boom period in the U.S. economy during the 1920’s that caused serious imbalances to build up towards the 1929 crash: weak purchasing power, persistent unemployment, volatility in agricultural sectors, etc. that led to slowdowns in investment not compensated for by increased government expenditures. Typical of this perspective was Richard Hofstadter, William Miller and Daniel Aaron, *The United States* (Englewood Cliffs, N.J.: Prentice-Hall, 1957), 674. More specialized histories of economics and finance called attention to monetary issues. John Maynard Keynes argued in *A Tract on Monetary Reform* (London: Macmillan, 1924) that efforts in the 1920’s to reestablish the gold standard were leading to potential economic problems and Keynes thus emphasized the importance of price and currency stability. Keynes thought this could best be achieved through currency devaluation and that the gold standard inhibited central bankers from achieving the objectives of price and currency stability. For an updated affirmation of Keynes’s position see Barry Eichengreen, *Gold Fetters: The Gold Standard and the Great Depression, 1919 - 1939* (Oxford: Oxford University Press, 1992.) Milton Friedman and Anna Schwartz, by contrast, argued that U.S. central bankers did have it within their power to maintain the money supply at a level sufficient to accommodate the worst effects of the Great Depression and to prevent bank failures. This view has been highly influential. See Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States 1867 – 1960* (Princeton, N.J.: Princeton University Press, 1963). For a more comprehensive account of this history see Liaquid Ahmed, *Lords of Finance: The Bankers Who Broke the World* (New York: Penguin Group, 2009).

Club of Rome) highlight how a confluence of problems and issues can arise on which we are dependent for solutions upon fortuitous events rather than scientific rationality.⁷⁹

Setting the Stage: Reconsidering the Role for Instrumental Ethical Theories

Until this point we have not analyzed the viability of the Enlightenment project in terms of its power for generating prosperity and economic benefits that can be widely dispersed throughout a given population. The historical record has established this success beyond dispute. The question that has now been raised is that of sustainability. Can the prosperity escalator of free markets continue indefinitely? Does a capitalist economic program always have the power to proceed under an unrestricted, laissez-faire mandate, assimilating all of its innovations into a seamless whole without significant externalities? Was Hayek right in arguing that markets are unsurpassed in structurally organizing knowledge with a maximal efficiency that would be undermined under the restraints of specific exercises of rationality? In short, does the invisible hand succeed in transforming private vices into public goods? Economists from Ricardo to Malthus to Marx to Hobson to Keynes have identified and discussed numerous roadblocks.

Our analyses to this point – covering both the operation of financial markets and the methods of scientific discovery – suggest that the Enlightenment project does not gain these structural guarantees. In cases of both financial markets and scientific discovery – i.e., in the practice of applied and theoretical sciences that constitute the Enlightenment's

⁷⁹ Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968). Barry Commoner, *The Closing Circle: Nature, Man and Technology* (New York: Knopf, 1971). More up to date works would include Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking, 2005) and Ronald Wright, *A Short History of Progress* (Toronto: Anansi Press, 2004). Important here too is Bill McKibben, *Eaarth* (New York: Knopf, 2010) which provides a comprehensive update of the Club of Rome Report. Also Jonathan Lear, *Radical Hope* (Cambridge, Mass.: Harvard University Press, 2006).

twin assumptions – greater advances, constantly impelled by imperatives of growth, result in greater complexity that takes the locus of economic activity away from local communities where the responsibilities of stewardship can be most effectively practiced and into larger networks that ultimately achieve a global reach. At these higher stages increased complexity makes a comprehensive vision of the whole more difficult to achieve. Theoretical sciences become more specialized and interdisciplinary links become harder to establish; markets become interlocking and lose advantages of diversification. Risk analysis becomes more difficult to subject to effective probability estimates and conditions of uncertainty become more likely. We become vulnerable to contingencies and unanticipated consequences because it becomes more challenging to exercise responsible practices of stewardship over these structural processes.⁸⁰

This growing complexity is matched by increasing human powers to “act into markets” and to “act into nature.” Our growing capacities to master nature and to advance our own interests develop to such an advanced degree that we gain the power to alter the very frameworks whose automatic functioning under “invisible hand” dogmas have long been taken for granted as a given assumption. This compounds our problems of exercising responsible stewardship because acting into markets and nature changes the very structural constituents that guaranteed the sustainability of our scientific and market practices. Hayek’s thesis of the structural guarantees of a “knowledge economy” breaks down, but his opponents cannot equally guarantee that specific and consciously directed

⁸⁰ What is being addressed here are the objective criteria for establishing ideal states of affairs that are sustainable over time. The more straightforward problem of aggregating individual preferences into majority or collective preferences is well documented under social choice theory, and was first identified during the Enlightenment by Condorcet as the “voting paradox.” (The full transitivity of individual choices is not maintained when such choices are collectively aggregated.) In 1951, Kenneth Arrow established an impossibility result that proved the inconsistency of social preferences under well established conditions constructed to meet minimum objectives (e.g. Pareto optimality).

procedures of rational analysis provided by government can be an effective alternative. We are competent enough to alter structural constituents but not competent enough to analyze or even anticipate all the possible consequences of these alterations.

With the loss of this automatic structural functioning, the laissez-faire model of free market operations breaks down and fails to provide an important and necessary pillar of the Enlightenment program. The motivation of market agents no longer aligns with the rationality of their actions; positive economics thus must give greater importance to normative economics.⁸¹ In effect, economics must seek the support of an ethical theory capable of serving an instrumental role of reconciling rationality and morality, of putting reason in the service of self-maximizing agents who seek to realize their own preferences.

Consequentialism in the Service of Economics

Consequentialism is an ethical theory based on the proposition that all normative ascriptions of actions are based entirely on the consequences of such actions. Such ascriptions in turn are dependent upon some structure of intrinsic values – be it pleasure, satisfaction, achievement, etc. or some combination that yields a pluralistic doctrine. These intrinsic values are thus constitutive of certain kinds of subjective experiences or, when aggregated and objectively rendered, states of affairs that we then have a duty to bring about. The objectivity of the reasons through which such states of affairs are justified is governed by “agent neutral” principles, which, through ethical imperatives, unify the moral objectives of a designated group of individuals, overriding whatever “agent relative” reasons they may hold. Consequentialism becomes of service to

⁸¹ See Daniel M. Hausman and Michael S. McPherson, *op cit.*, particularly their analysis of rationality, norms and morality, 78 – 98.

economics by generating the grounds under which market agents should align their private motivations and preferences with objectively valid and justifiable reasons in all circumstances in which market structures such as the invisible hand fail to automatically or reliably transform private vices into public goods.

Consequentialism thus diverges from standard views in economics by refusing to equate “welfare” (defined by economists in terms of the maximization of valuable experience by market agents) merely with the satisfaction of preferences. In aligning morality with rationality, consequentialists recognize both a normative and descriptive dimension to rationality, which in turn elevates the importance of normative economics relative to that of positive economics.⁸² Consequentialism thus best fulfills its instrumental role in support of economic theory, and can fully emphasize the vital importance of free markets and their imperatives of continuous and uninterrupted growth through innovations and efficiency improvements. Historically, consequentialist (specifically utilitarian) doctrines have provided a strong bulwark for the Enlightenment project itself.⁸³

Consequentialist and economic approaches cohere most effectively in their joint advocacy of ordinal utility ranking, or in Samuel Scheffler’s words,⁸⁴ “non-agent relative principles for ranking overall states of affairs from best to worst.” Providing a structural

⁸² It should be noted that alternative views of motivation in economics – rational expectations, prospect theory, behavioral economics – utilize descriptive models. Mainstream disputes in economics tend to regard moral considerations as attempts to politicize these debates, e.g. Paul Krugman’s dismissal of “morality plays” in economics. As he notes: “The market economy is a system for organizing activity ... with no special moral significance.... (W)hen we’re experiencing depression economics ... the essentially amoral nature of economics becomes even more acute.” Egregious activities like war or useless ones like burying bottles full of money in mine shafts (Keynes’s example) are what succeed in pulling economies out of depressions. Paul Krugman, “Economics is not a morality play,” *New York Times* blog, September 28, 2010. But normative economics is open to the rational decisions agents ought to be making.

⁸³ Despite the fact that Bentham rejected the rights of man, a central tenet of the Enlightenment, his beliefs in rationality had a powerful impact on political thought and legislation in Britain well into the 1800’s.

⁸⁴ Samuel Scheffler, ed. *Consequentialism and its Critics* (Oxford: Oxford University Press), 1.

framework for preference orderings facilitates the analysis of such preferences, with the understanding that a formal system cannot guarantee the rationality of the behavior of the agents themselves. Instead, the commitment to ordinal ranking leads to the analysis of risk assessment and the determination of expected utility functions. Such assessments are based upon the ascription of cause and effect relationships that link together sequential states of affairs. However, consequentialism can effectively serve its instrumental role only if all possible alternative states of affairs can be effectively determined in advance. To the extent that unknown contingencies cloud the picture, consequentialist analysis moves out of effective risk analysis and into the economic domain of uncertainty.⁸⁵

Under ordinal utility theory, preference orderings must satisfy conditions of both completeness and transitivity in order for the ranking to provide finite sets of alternatives that in turn constitute the basis for accurate risk assessment and prevent the drift into “uncertainty.” (With completeness, the agents provide full rankings for all possible preference options; transitivity ensures that rankings between three or more alternative options do not generate contradictions in ranking. If agent A prefers x to y and y to z, he must prefer x to z.) What utility theory thus establishes is a set of formal conditions that preferences ought to satisfy. For this reason, economists are extremely reliant upon the automatic structural functioning of markets themselves (i.e., private vices are converted to public goods; Hayek’s “knowledge economy” guarantees maximal outcomes without specific acts of rational intrusion) because they have a very strong burden to demonstrate that the choices and preferences of market agents do, in fact, substantively realize

⁸⁵ The distinction drawn between risk and uncertainty by economist Frank Knight in 1921 was based on the efficacy and decidability of probability distributions, but would not have made allowances for false information. After Hayek the reliability of information reaching the market would have been assumed.

conditions of rationality. More significantly, utility theory in and of itself cannot provide a stand alone model of rational preferences since rationality itself is a normative concept.

Given the structural shortcomings of markets and utility theory, consequentialism thus has an indispensable role to play in support of economic theory. It provides a means of closing the gap between the motivations of market agents and the rationality of their actions by positing objective states of affairs (beyond the ideal experiential states of subjective agents) that agents themselves, under principles of agent neutrality, must be morally compelled to bring into existence. By promoting ideal states of affairs that command such fealty from market agents, consequentialism can prevent exercises of market power or conflicts of prudential rationality that could destabilize free markets lacking structural guarantees provided by the “invisible hand” or other mechanisms.

What consequentialism provides in this context is a theory of instrumental rationality that puts reason in the service of subjective preferences, but does so in a manner that harnesses such preferences to objective standards through which utility can be maximized and optimal states of affairs brought into existence. Reason, in fact, has a demanding mandate from specialized sciences to clarify our underlying desires and motivational impulses, analyzing the means-to-ends relationships that elicit the causal connections between one state of affairs and another. It has a clear role in determining the maximum efficiency through which human aspirations are to be realized. As Robert Myers astutely notes, instrumental reason can go much further in validating the specific conditions under which various desires are actually achieved as fully constituted objectives. What is not permitted to reason is clearly elaborated by Myers himself:

What instrumentalism would not allow, however, is that there are some facts which do not in any way concern the optimal satisfaction of the basic desires that

a person has at a time but which nevertheless play a fundamental role in determining the reasons for actions that she has then.⁸⁶

Ordinal utility theory does depend on assumptions of objective values capable of generating rationality in the choice of agent preferences, values which on the one hand are attributes of cogent, definable material benefits from which all agents can benefit, and on the other hand are universally characteristic of human desires.⁸⁷ In this sense, human desires are fully coextensive with the twin assumptions of the Enlightenment, geared as these are towards the expansion of material benefits through the aegis of free markets and the unimpeded exercise of scientific rationality. However, the argument advanced so far in this chapter has brought to light circumstances that challenge the viability and stability of these preference orderings because the very conditions of possibility that structure “the pursuit of happiness” and “the satisfaction of basic desires” have now been called into question. It has been determined that, even with the best of intentions, individual agents now have the power to “act into markets” and theoretical scientists have the power to “act into nature,” thus altering the structural constituents of both markets and the natural world in ways that can clearly create unforeseen consequences. What is thus under threat is the very capacity for consequentialists to conduct effective risk analysis. The growing complexity of both science and markets that has been evidenced earlier in this chapter creates conditions of uncertainty that severely undermine the possibility of determining cause and effect relationships between sequential sets of states of affairs, an enterprise that is a central objective of the consequentialist project. The one certain consequence

⁸⁶ Robert Myers, *Self-Governance and Cooperation* (Oxford: Oxford University Press, 1999), 87fn2.

⁸⁷ A thorough analysis of the relationship between economics and consequentialist approaches with respect to ordinal utility theory and the value that consequentialism itself brings to the table of economic analysis is provided by Daniel Hausman and Michael S. McPherson, *Economic Analysis, Moral Philosophy and Public Policy*, 2nd edition (Cambridge: Cambridge University Press, 2006), 97 – 117.

that can be gleaned from our increased capacity to act into nature and into markets is our growing dependence upon the contingencies of random events, events over which we can only exercise limited control.

Moreover, these findings not only weaken consequentialist analysis but challenge the very basis of instrumental rationality itself. If the conditions of possibility that make the satisfaction of human desires viable are under threat, then there are clearly facts and truths that are of specific concern to practical reason that are not directly related to the satisfaction of such desires and may even require that such fulfillment be set aside or sacrificed. (Exercises of instrumental rationality may well increase the number of times that the precautionary principle needs to be invoked, but it would require an exercise of non-instrumental rationality to invoke it.⁸⁸) More significantly, there isn't even an indirect concern, since these conditions of possibility are not subordinated to conditions of desire satisfaction but are directly tied to long term constitutional foundations and permanent social and political institutions that are based on universal principles pertaining to the rights of man that are themselves a central part of the Enlightenment heritage.⁸⁹ Given that the future economic prosperity – and even the survival - of

⁸⁸ If this is true, it could arguably limit the scope of what has come to be known as “the moral free zone.” This concept has been championed by David Gauthier, Thomas Donaldson and others. In the view of its supporters, the moral free zone allows the full initial use of new technologies, practices or procedures until such time as moral failures or moral disasters occur. Exercises of the precautionary principle would thus restrict or possibly prohibit its application. David Gauthier, *Morals By Agreement* (Oxford: Clarendon Press, 1986).

⁸⁹ An example can be found in recent delineations of rights re: basic necessities, which are now receiving greater emphasis because of climate change and resource depletion. This has made it more necessary to spell out the exact nature of such rights, since such rights are tied to states of affairs that constitute the conditions of possibility for important and long established rights, such as those elaborated in the UN Universal Declaration of Human Rights (1948). In July 2010, the United Nations General Assembly passed Resolution A/64/292, which recognizes the universal right to safe drinking water and sanitation as a basic right tied to the fundamental rights to life and human dignity. However, both Canada and the U.S. have both officially sought to deny or distance themselves from such rights claims. Canada advocated against A/64/292, while the U.S. issued an “interpretive statement” in response to the 1996 World Food Summit in Rome, which sought international commitments re: eradicating global hunger. In its statement

Western society depends upon access to cheap energy, the scenario of imminent resource access and depletion presented by “peak oil” arguments is one that must be analyzed and resolved through the crucible of universal principles related to the precautionary principle and sustainability.⁹⁰ It cannot be determined through cost/benefit calculation or determination of interests because such calculations – as with preference rankings – are fixed at a given moment of time and may be altered by unforeseen or unforeseeable contingencies. If a solution to peak oil is proffered through alternatives such as liquefied coal or hydraulic fracturing, then the issue must again be subjected to analysis through the precautionary principle because such methods dramatically increase greenhouse gas emissions, which themselves represent a huge threat to human sustainability and survival.

The alternative to instrumental rationality is an approach that gives reason full authority to establish final ends independently of the dictates of passions or basic desires and to stipulate that the ultimate ends of any civilization – or even humanity as a whole – must be determined in full conformity with universal principles re: sustainability and the precautionary principle. This alternative, typically associated with Kantian ethical theory, goes on to note that the rational motivations generated by desires do not carry any inherently moral import, and must be countered by internal motivations toward duty that compel us to restrain or prohibit this motivational force exerted by the passions. Thus,

the U.S. claimed that “the attainment of any ‘right to food’ or ‘fundamental right to be free of hunger’ is a goal or aspiration to be realized progressively that does not give rise to any international obligations.” See Thomas Pogge, *World Poverty and Human Rights*, 2nd ed. (Cambridge: Polity Press, 2008), 11.

⁹⁰ In July 2012, environmentalist Bill McKibben undertook a mathematical analysis to demonstrate that global reserves of fossil fuels would have to be left in the ground in order to have any chance of limiting global temperature increases to the established two degree Celsius limit. (Specifically he argued that we can only emit a further 565 gigatons of carbon into the atmosphere, but that global reserves of oil held on the books of oil companies would result in a carbon release of 2795 gigatons.) See Bill McKibben, “Global Warming’s Terrifying New Math,” *Rolling Stone* July 19, 2012. From the perspective of stock markets, oil company stock value directly depends on proven reserves, and so a necessary market assumption for corporate valuation is that all of these oil reserves will eventually be developed and sold on global markets. S. Coll, *Private Empire: ExxonMobil and American Power* (New York: Penguin, 2012).

what is rejected are the assumptions of economists and consequentialists that there are structural forces capable of aligning reasons and motivations – or that in the absence of such structures we can exercise reason towards the achievement of states of affairs that reinstate this alignment. This is rejected for the reason that there is no guarantee that such states of affairs, efficacious though they may be at a particular time, can be made permanent or sustainable, or can avoid the kinds of long term risks prohibited by the precautionary principle.⁹¹ Again, we are highly vulnerable to the contingencies and random events that result from the economic imperatives that necessitate that the precautionary principle be trumped by the proactionary principle, and thus that the expense of innovation be limited to feasibility costs and not to the full range of social costs that might be impossible to determine in advance for new product development.

The failures of consequentialism to serve as an effective handmaiden to economics go deeper than this. Consequentialism is itself an ethical theory that makes

⁹¹ Robert Myers develops an excellent argument that provides important insights with respect to the position being developed in this dissertation. Roughly, Myers recognizes difficulties in instrumental rationality, but claims that the position gains strength from Hume's theory of motivational internalism, which is based upon the primacy of desire. Myers argues that what is mistaken in this position is the claim that desires serve a purely functional role. Rather, according to his account, desires can be shaped by normative beliefs that are truth functional and supported by reasons that in turn can be justified. Thus the desire to be moral is not one contingent desire among many, but a necessary constituency of human agency. On the Kantian view that will ultimately be elaborated *pace* Hume, Kantian internalism goes hand-in-hand with a version of moral realism whereby the motivation of duty is coextensive with commitments to beliefs in theoretical judgments that require, as conditions of possibility, precommitments to the truth of any such judgment (if in fact true) no matter how much it may contradict one's own interests or biases. (Kant is thus depicted as an epistemic deontologist.) From this follows an ethical rationalism that commits a Kantian to be necessarily motivated through duty to compliance with any moral truth once validated as truth. Essentially, the priority of pure practical reason to theoretical reason is asserted so as to require the subordination of the latter to the former. The Kantian thus avoids irrationality by judging his own actions not merely in terms of what he does know with regard to theoretical reason, but what he ought to know. This point is of vital importance when addressing problems of complex modern technological societies with respect to issues of acting into markets or acting into nature. In any case, a clear contrast is created with Hume's version of motivational internalism, in which the motivation to act is located entirely within the desire to act and can never be situated within the acknowledgement of a theoretical truth (in order to preserve the fact/value and is/ought distinctions). For the externalist, on the other hand, acknowledgment of a moral duty does not create any necessary motivation to act upon it. This is related to the externalist's general refusal to recognize any meaningful distinction between theoretical and practical reason. (Myers, *op cit.*, 86 – 102. See also Robert H. Myers, "Desires and Normative Truths: A Holist's Response to the Sceptics," (375 – 406) *Mind* (April 2012) vol. 121, no. 482.)

certain structural assumptions in order to narrow its focus on substantive content where moral judgments are concerned. However, the problems that are being addressed in this dissertation are not so much concerned with meeting demands for substantive content, but with structural transformations that are driving these very changes in content.⁹²

Structural Conflicts and the Doctrine of Double Effect

The “deep problems” that consequentialism encounters in its service to economics can best be understood by setting forth the conflicts and inner tensions between the precautionary and proactionary principles and their structural role in a modern economy. The proactionary principle is the one most central to the modern imperatives of economic growth, because of its emphasis on the vital importance of innovation and the freedom to experiment using the best available science. The preeminent economist Joseph Schumpeter put so much emphasis on this imperative that he feared that capitalist economies would ultimately wither because of the structural evolution of modern technological states toward large corporate organizations that would suffocate the vitality and originality of innovative activities.⁹³ Supporters of the proactionary principle thus

⁹² Having said this, however, it is necessary to emphasize the crucial role that consequentialism plays in stressing the importance of states of affairs and establishing an objective basis for rational ends that exceeds that set by free market theory as already noted. It could also be argued that the analysis that has been provided in this chapter strengthens the hand of consequentialism in debates against deontological theories. As has been shown here, states of affairs can be crucially important and even provide the very conditions of possibility needed to develop the values of personal obligations and agent relative concerns that are noted by those opposing consequentialism. It could thus be argued that there are situations where the establishment of certain states of affairs supersedes considerations of justice or rights. Nor would such agent neutral considerations be seen as too demanding; in fact, they would be necessary. There would also be a strong case made against the arguments of those who, like Philippa Foot, claim that the priority of states of affairs as an essential plank of consequentialist arguments depends upon the virtue of benevolence. Cf. Philippa Foot, “Utilitarianism and the Virtues,” (224 – 242) in *Consequentialism and its Critics*, Samuel Scheffler, ed. (Oxford: Oxford University Press, 1988) and Samuel Scheffler, “Agent-Centred Restrictions, Rationality and the Virtues,” (243 – 260), in the same volume, which responds to Foot.

⁹³ Schumpeter’s thinking on innovation was unconventional because he did not see it as emerging from the circular flow of investment, labour and consumption, but rather against it. What the circular flow created

insist that there is a strong burden of proof on those who would hinder innovation. The opponents have an obligation to show why the best available cost/benefit analysis is not viable, and further, to take account of the opportunity costs of lost innovation.

The precautionary principle, on the other hand, rejects cost/benefit analysis and instead invokes the necessity of deontological prohibitions with respect to actions, policies or innovations that may result in severe damage to the public, with the burden of proof asserted against those who advocate such policies in the absence of a scientific consensus regarding the magnitude and extent of the ultimate harms. The emphasis is thus on principles of sustainability and on the possibility of incurring irreversible damage, a possibility that there may be no chance to consider given the best available science at the time initial cost/benefit analysis is undertaken. The precautionary principle thus illuminates cases where effective risk analysis may be impossible and where contexts of uncertainty prevail, as opposed to those that make risk analysis possible.⁹⁴

in Schumpeter's judgment was a routinization not dissimilar to Weber's "iron cage," (fn 15) a consequence of an instrumental rationality that established rigid processes more restrictive to the flowering of inventive creativity than conducive. What innovation accomplished was a rupture of established systems (the link to Schumpeter's concept of "creative destruction" is clear) that caused these systems to quickly but efficiently adapt themselves to the innovation, and initial profits would diminish with its adaption by competitors and imitators. The new innovation thus becomes a part of the established regime, which must be upended again by the next innovation, and so on. Clearly built into this model is Schumpeter's unwavering belief in the natural resilience of capitalist systems and their infinite adaptability to new innovations, as well as a clear anticipation of Hayek's theories of natural flows of information into free markets by a wide variety of agents constantly infusing markets with new ideas and inventions. Schumpeter's greatest fear was that the process of innovation itself would become routinized by large enterprises or (worse still) the government itself, and thus the capitalist system would become afflicted by a sclerosis that might eventually destabilize it. What Schumpeter did not anticipate was the growing complexity of markets and the eventual need for governments and large enterprises to take over much of the process of innovation because of the economies of scale needed to make it work. The precautionary principle, by contrast, takes account of the need for innovation to emerge from all possible sources, given the complexity of modern economies. See J.A. Schumpeter, *The Theory of Economic Development* (Cambridge, Mass., Harvard University Press, 1949).

⁹⁴ Earlier uses of the term "precautionary" to describe current problems of climate change or resource use tended to link the term to what were seen as imperatives of prevention, e.g. Principle 15 of the UN *Rio Declaration on Environment and Development*, which notes the need of a "precautionary approach" to protect the environment: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation." (*Report of the United Nations Conference on Environment and Development* A/CONF.

The tensions between the two principles are evident in cases where each of them has seemed successively to be correct, given the different time frames under which the problems of modern technology have unfolded. The explosive growth of post-1950, consumer-driven Western economies provides the best example of this duality. A study of the period running from 1945 to 1970 would seem to vindicate the advocates of the proactionary principle, since the overwhelming economic benefits to societies built upon an automotive, suburban culture would have seemed undeniable. The period running from 1970 to 2005 would seem to vindicate advocates of the precautionary principle, since it now appears possible that damage from greenhouse gas emissions (which sharply escalated during this period) is irreversible and that the extraction of fossil fuel resources around the world is no longer sustainable. In different times and under different contexts both principles have seemed to be true, given the best geological and environmental science available in 1945 when the commitments to this kind of social development were pushed ahead.

The dynamic tensions between these two principles over long periods of time cast into doubt the viability of instrumental rationality because they clearly demonstrate the

151/26, Vol. 1, Annex 1, Rio de Janeiro, 3 – 14 June 1992.) By 2005 the UN had distinguished the precautionary principle from the prevention principle, the latter reflecting the meaning of Principle 15 as above. In such cases, risks can be measured through probability analysis and preventative measures taken. By contrast, the precautionary principle was to apply in cases of uncertainty, i.e., when dealing with “those hazards that are unacceptable,” but for which “poorly known outcomes and poorly known probabilities result in “unquantified possibilities.” (“The Precautionary Principle,” *UNESCO World Commission on the Ethics of Scientific Knowledge and Technology*, March 2005.) It is to be noted that the distinction between risk and uncertainty used here follows that of Frank Knight’s 1921 distinction in economics. However, this distinction between precautionary and prevention principles was not uniformly adopted, and the distinction has been collapsed as a way of attacking the precautionary principle. See Julian Morris, “Defining the Precautionary Principle,” (1 – 21) in *Rethinking Risk and the Precautionary Principle*, Julian Morris, ed. (Oxford: Butterworth-Heinemann, 2000). A similar misunderstanding of the precautionary principle is articulated by Onora O’Neil, in her 2001 Gifford Lectures, which also collapses the precaution-prevention distinction: “... the stronger versions of the precautionary principle are incoherent, and the weaker versions lack bite.” Onora O’Neil, *Autonomy and Trust in Bioethics* (Cambridge: Cambridge University Press, 2002), 164.

need to focus the use of human reason on final ends and on the ultimate objectives of human and social existence when structural contradictions or conflicts of rationality of this sort are engendered. The engagement between the conflicting imperatives of the precautionary and proactionary principles is entirely formal and structural in nature; they have in and of themselves no direct bearing on the satisfaction of human desires; they engage final ends, which can be understood only through a priori, not a posteriori analysis. Clearly, we are no longer in a domain of automatic structural functioning, as in Hayek's knowledge economy or the invisible hand, but we are also removed from consequentialist solutions because there are no ideal states of affairs that can resolve structural conflicts of this sort. If the potential damage from greenhouse gas emissions is irreversible or if we are headed inevitably for economic collapse as a result of fossil fuel depletion or if we are trapped irrevocably in conditions of uncertainty, then there is no substantive content or prescriptions that can be produced by any ethical theory.⁹⁵ In that case, ethical judgments may have to be restricted to retrospective or forensic analysis of structural failures. To borrow a powerful phrase from Samuel Scheffler (stated in the context of agent-centered restrictions): "human practical reason may be at war with itself."⁹⁶

⁹⁵ Social contract theory also seems to offer very little in terms of helpful analysis. For example a central claim of Integrative Social Contract Theory (ISCT) is the possibility of bringing actual, "micro level" business contracts into alignment with principles that would hold at a "macro level." On this account a conflict of principles such as that between the precautionary and proactionary would not seem to be possible. Hobbesian theories are more promising, but even here there are difficulties. David Gauthier's "morals by agreement" argues that morality is based on practical rationality, but that rationality is founded on the advantages gained through bargaining, not on the possibility of catastrophic outcomes that are a consequence of conflicting principles. Thomas Nagel also sketches a Hobbesian picture, this time with respect to global justice. On this account, we must tolerate considerable injustice over time as international institutions develop, but the only catastrophes considered possible are only temporary in nature. Thomas Scanlon's contractualism, by contrast, is predicated on agreement facilitated by full information.

⁹⁶ Samuel Scheffler, "Agent-Centered Restrictions, Rationality, and the Virtues," (243 – 260) in *Consequentialism and its Critics* (Oxford: Oxford University Press, 1988), 259.

What is being claimed here reverses a standard criticism⁹⁷ advanced by consequentialists; i.e., that it is deontological theories that are themselves plagued with structural paradoxes. The point of turning tables in this way is to demonstrate the importance of analyzing and understanding structural issues in all their complexity as fully as possible. The uncertainty and conflicts of rationality generated by the structural engagement of the precautionary and proactionary principles are directly related to other structural conflicts, such as that between feasibility and social costs. If these formal dilemmas and paradoxes are genuine, then by definition they cannot be tackled through instrumental rationality, which is rigidly based on assumptions that final ends are fully exhausted by and established on the material fulfillment of human needs, the imperatives of which cannot come into conflict without compromising desire as the final end.

What is required, then, is a non-instrumental form of human rationality that relies upon universal, a priori principles (e.g., sustainability) and specific exercises of human reason in order to apply such principles and establish the contexts in which they function. Resolving conflicts between precautionary and proactionary principles requires a long term, multi-generational focus on establishing final ends, ultimate objectives that satisfy

⁹⁷ Samuel Scheffler argues that deontological theories are inherently paradoxical, as exemplified by the rule forbidding the killing of innocent persons. Violating this rule could actually result in its fulfillment, since the killing of one innocent could conceivably save the lives of many more. Since paradoxes are generally resolved by higher order structural analysis, it would make sense to analyze the conditions of possibility whereby the killing of one innocent results in the deaths of many other innocents and thus locate the moral issues in the historical circumstances rather than in the structurally isolated content of a specific scenario. This, of course, goes against a central dogma of consequentialist analysis, which emphasizes the crucial importance of substantive content and thus that clear moral decisions are possible for real and hypothetical events. A Kantian should be able to counter such claims through structural/historical analysis, dismissing typical criticisms that rely on “moral luck” or scenarios about telling the truth to Nazis in search of Jews hiding in attics. Thus, the sort of Hobson’s choice scenario that is presented to the Kantian re: the dilemma of Jews is hiding in the attic does not facilitate genuine moral choice because the true moral issue rests in the historical circumstances and the conditions of possibility that brought about the rise of Nazism in the first place. Consequentialists locate the moral issue in the substantive content of the issue, not in structural frameworks. Cf. Samuel Scheffler, “Agent-Centered Restrictions, Rationality and the Virtues,” *op cit.*

the requirements of sustainability. Economists themselves have long been aware of the dangers of irreversible problems that can occur under conditions of uncertainty.⁹⁸

A program for setting final ends and ultimate objectives gains importance when, as discussed earlier in this chapter, economies grow beyond traditional capacities for localized control and stewardship, when free markets become more complex and interlocking, weakening the longstanding protections of diversification.⁹⁹ As this complexity grows, it becomes more difficult to attain a comprehensive picture of markets as a whole beyond the diversity of their manifold interrelationships; it becomes difficult to comprehend the powers of science as a whole, given its increasing specialization. As scientists and individual agents gain the power to act into markets and act into nature, it becomes more difficult to trace the consequences of their actions in all their diversity.

It must be repeated that the faults in question are structural, that scientists and entrepreneurs in the vast majority of cases operate with the best of intentions. The proactionary principle makes innovation an imperative, and - to repeat a point made earlier - the concern is not with irresponsible or nefarious uses of science, but with real difficulties in understanding the moral significance of actions governed by scientific and economic imperatives in pursuit of an Enlightenment goal of human progress.

Perhaps the best way to understand this confluence of good intentions and the structural roadblocks encountered by consequentialist approaches is through the doctrine of double effect, a philosophical principle with a distinguished history and a wide

⁹⁸ Kenneth Arrow and A.C. Fisher, "Environmental Preservation, Uncertainty and Irreversibility," (312 – 319) *Quarterly Journal of Economics* vol. 88, no. 2 (1974).

⁹⁹ If this argument holds, it would jointly uphold Kantian and consequentialist positions against that of virtue theorists such as Philippa Foot, who rejects the claim that the objective of ethics is the "harmonizing of ends" and that the priority of states of affairs is merely a consequentialist assumption. Philippa Foot, "Utilitarianism and the Virtues," (224 – 242), *op cit.*, 240 – 241.

diversity of applications. The essence of the principle is the justification of actions that inadvertently cause harm based upon an ethically meaningful distinction between actions that are intended and those that are not intended but foreseen. Its engagement of issues of externalities, intentions and contingencies makes it highly relevant to the problems of the Enlightenment project and its twin assumptions. Well meaning market agents could very well act upon imperatives created by the proactionary principle, knowing that they could engage conflicts of rationality created by the precautionary principle. They could very well bring innovations into manufactured production, knowing that there could be significant social costs that cannot yet be quantified through regression testing.

Consequentialists deny this principle because they deny the relevance of moral intentions with respect to final outcomes, given the deontological prohibitions that make foreseen but unintended consequences pertinent as ethical issues. They argue that most applications of the principle can be dissolved by determining the proportionality of all possible outcomes (positive and negative), ranking the expected utility functions, and undertaking cost/benefit and risk analysis as usual.¹⁰⁰

However, the problems relating to acting into nature and acting into markets put consequentialists into an entirely different bind because we cannot predict the specific results of the structural transformations these entail. What is foreseen but not intended

¹⁰⁰ The doctrine of double effect has also been attacked by non-consequentialists, who argue that the doctrine itself is misleading or illusory, that the situations being analyzed should be broken down into cases where the harmful effect is an exceptional condition, rather than an attempt to distinguish causal from correlative relationships between states of affairs, such that one set of events can be designated as “side effects” and another as “means to end.” But this type of analysis of states of affairs is central to the goals of this dissertation, and so cannot be reduced to the obligations agents have to each other, such as Thomas Scanlon claims in his critique of the doctrine of double effect. Scanlon argues that the intentions of an agent are related to her attitudes with respect to other agents (for which she may be blamed), and thus the meaning of her actions are directly tied to such attitudes and intentions, not to those relating to states of affairs. T.M. Scanlon, *Moral Dimensions: Permissibility, Meaning, Blame* (Cambridge: Basic Books, 2008).

are the violations of the precautionary principle itself; thus, we can anticipate structural failure in markets without having any idea of its substantive content. What we foresee is entirely formal in nature, thus taking us out of the possibility of risk analysis and into the domain of uncertainty. Under the conditions of the breakdown of Enlightenment project and its twin assumptions as described in this chapter, the doctrine of double effect retains its original force and Thomistic design as a principle dependent entirely on deontological prohibitions and not in any way explainable or justifiable through the proportionality of the different consequences that become manifest through double effect (since the substantive content of such outcomes cannot be predicted).

As well-intentioned agents navigate proactionary and precautionary principles through the crucible of the double effect doctrine, they will likely reject the automatic processes of structural mechanisms associated with free markets and their supporting institutions and recognize that they can no longer necessarily address these issues through a consequentialist analysis. They would recognize the limits of instrumental rationality and know that the problems they now confront require solutions determined through the application of universal, a priori principles and the non-empirical rationality these entail. Their motivation will come not from a Humean internalism; it will come from one that recognizes that duty does not originate in emotions but in a rationality bent on limiting their motivational force. The truth of moral imperatives will be fully motivating and will originate in moral facts pertaining to the structural constitution of markets, institutions, social networks and scientific enterprises, and yet will be formally detached from them.¹⁰¹

¹⁰¹ A possible example of an agent recognizing such imperatives could be argued for the case of Sir John Browne, the former CEO of British Petroleum, who broke the consensus of oil industry CEO's in the late

Thus, what is anticipated in the subsequent chapters of this dissertation is the need for a moral theory best realized by the philosophy of Immanuel Kant, with its strong emphasis on deontological prohibitions (the categorical imperative), as well as on the moral sovereignty of individual agents and the force of their intentions (with respect to Kant's concept of the good will). While this chapter has been critical of consequentialist theories, it will come to be seen that they are, in fact, indispensable, vitally necessary for the hypothetical imperatives and the calculations of cost/ benefit analysis that make economic imperatives and technological advances possible.

Conclusion: A Final Assessment of the Enlightenment Heritage

Both Kantian and consequentialist thinking played a vital role in Enlightenment philosophy, and the role of the former will be considered in more detail in the opening sections of the next chapter. This centuries-long process of scientific advance began with the need to overthrow religious dogma in order to make room for the development of scientific intelligence, but gradually began to re-emphasize the vital importance of moral philosophy in the provision of guidelines and benchmarks necessary for its development. This chapter has been concerned with the difficulties of consequentialism in serving as the handmaiden to economics in this endeavor, but the dynamics of the Enlightenment movement itself provide deeper reasons for these problems.

The failure of consequentialism is directly linked to what has been described in this chapter as the failure of the Enlightenment project and its two principal assumptions: the power of the scientific method in manifesting the force of theoretical science and the

1990's by recognizing the validity of scientific claims re: global warming. Realistically, it might be better claimed that Browne's motivations were more strategic in nature, part of his efforts to re-brand BP as a green energy company. But if genuine, Browne's action would exemplify motivational internalism.

power of free markets in manifesting the force and utility of practical science. One legacy of the Enlightenment heritage is the fact that these two assumptions initially worked very well for a considerable period of time before their long term weaknesses began to evolve into very serious problems, e.g., resource depletion, global warming and economic breakdown. For two centuries, our structural frameworks have, in fact, successfully assimilated the inventions and innovations made possible by science and business – at least long enough to allow their material benefits to flow not just through national economies but around the world through the process of globalization. The negative impacts and externalities of these developments have been building slowly toward a critical mass that has only gradually made “ingenuity gaps” apparent. In fact, the great success of consequentialist theories so far lies in the fact that their approaches are most valuable when the automatic functioning of structural mechanisms such as the invisible hand and knowledge economies break down, and consequentialists do succeed in exercising agent-neutral principles in devising rational programs for the elaboration of states of affairs that must exist in order to rectify breakdowns in these automatic functions.¹⁰²

¹⁰² Examples can be found in the 1990’s in developing world economies that converted to free market principles or that had to correct triple digit inflation. As Daniel Hausman and Michael McPherson make clear, radical overhauls of political policy of this kind cannot be merely technical exercises by economists. “... (T)he political process rarely formulates its economic problems clearly. When economists are called on to give “purely technical” advice about how to accomplish certain ends, they are rarely given purely technical problems. Just think about the tasks of economists who are asked to advise governments on how to transform formerly socialist command economies into market economies. Without knowledge of the prevailing system of value and moral constraints in those societies, they will not know how to proceed.” Daniel M. Hausman and Michael S. McPherson, *op cit.*, 294.

Consequentialism has in a sense (given the findings presented in this chapter) been a victim of its own success.¹⁰³ Its resurgence in the 1980's under Stephen Scheffler, Robert Goodin and others accompanied a renaissance of confidence in free markets, in the structural viability and reliability of markets and institutional systems, and it is the deontological approach (that in consequentialist doctrine always elicits dilemmas and paradoxes) which has been on the defensive. As a result of the confidence in the unerring power of risk analysis to successfully determine and manage states of affairs, it is simply a given that the principal task of ethical theory is to set forth a program of impartial beneficence to make these states of affairs possible. Once we know what states of affairs will maximize good outcomes it is a relatively straightforward exercise to grant agents their prerogatives of action with respect to their market behavior and in social and legal contexts.¹⁰⁴ Deontological prohibitions, if such there be, are merely minor restrictions – in Nozick's terminology "side constraints" - i.e., issues primarily centered on individual agents, not the social order at large.

This chapter has been concerned with establishing vitally important exceptions to this consequentialist scenario, with setting forth the conditions under which it is possible for well-intentioned agents to "act into nature" or "act into markets" in such a way that their exercises of market power, scientific acumen and personal prerogatives are powerful enough to threaten the viability of the structural systems that make these exercises possible in the first place. These exercises create dynamic tensions between proactionary and precautionary principles that lead to the loss of rigidly defined alternatives of "risk"

¹⁰³ One critical point raised about utilitarianism/consequentialism, one dating back to Sidgwick and raised again more recently by Bernard Williams, is the possibility that it works most effectively if invisible; i.e., if people don't believe it or are unaware of it, then the best outcomes are produced.

¹⁰⁴ Moral prerogatives permit agents to act and function in ways that do not maximize the general good and thus act as an exception to impartial behavior as demanded by consequentialism.

and place us clearly in the domain of “uncertainty,” where the possibility of identifying “irreversible trends” is a clear and present danger.

If the Enlightenment project had left us with a principal legacy of structural reliability in terms of markets, institutions, etc., then consequentialism could in fact proceed with a program based on a central imperative of impartial beneficence. Such reliability makes a program of instrumental rationality possible because there is nothing to impede the central objective of satisfying human needs and desires to which the exercise of rationality fulfills a supporting and enabling function. All meaningful analytical work of reason is thus confined to a posteriori analysis and cost/benefit determinations. Within this moral framework, consequentialism has been singularly successful in establishing objective grounds for preferences and making ordinal utility rankings functional.¹⁰⁵ In fact, consequentialists must continue with this vitally important work. No understanding of our complex, technological future is possible without it.

At the same time a new approach – and, it will be argued, a Kantian approach – is now required to address these high level structural problems under which once long term moral issues are now crowding into the present and creating “ingenuity gap” dilemmas that must be resolved under restricted time frames using highly sophisticated expertise. It requires a Kantian approach to realize that the immediate road forward requires not an emphasis on impartial benevolence but a program for preventing or forestalling moral disasters. This requires a new emphasis on objective and universal deontological prohibitions that must provide the conditions of possibility for all subsequent efforts to realize substantive content relating to the objective for maximizing beneficial outcomes.

¹⁰⁵ Daniel M. Hausman and Michael S. McPherson, *op cit.*, 43 – 59.

For this reason, the doctrine of double effect has been given a new lease on life and a renewed emphasis. It is not, as consequentialists claim, a pseudo-doctrine that can be reduced to proportionality calculations related to specific outcomes. It has instead become a powerful tool for understanding the dynamic tension between precautionary and proactionary principles and the overwhelming externalities to which this gives rise. Since we are now operating under a domain of “uncertainty” and not one of “risk,” what we foresee but do not intend are violations of universal principles of sustainability, not a specific content of events that results from the structural transformations of acting into nature and markets, since these unleash a flood of contingencies that cannot be reliably predicted. The doctrine of double effect has thus, ironically, carried us back in time, out of the Enlightenment paradigm and back into the timeless and universal thinking of Thomas Aquinas, who first elaborated the doctrine and took note of the vital role of universal principles and of deontological prohibitions.¹⁰⁶

The breakdown of the Enlightenment and its twin assumptions means that all of its best elements – the championing of science and the rights of man – have not been enough to deliver a long term structural system that could fully facilitate a moral program concerned primarily with impartial benevolence. Given the potential impacts occasioned by our power to act into markets and into nature, ethical theory must be less concerned with determining substantive content and more concerned with the forensics of structural analysis, studying the conflicting imperatives, rationality and dynamics of our economic and social/political systems and institutions. There must now be a far greater focus on a priori rationality and the formal attributes of our structural frameworks.

¹⁰⁶ Frederick Copleston, *Aquinas* (London, Penguin Books, 1991).

In the end, therefore, the Enlightenment project is brought back to the need for deontological prohibitions, universal principles and the types of permanent policies and multigenerational moral objectives for the society at large that were lost with the disempowerment of religion (and the theology of the Catholic Church in particular) in early modern times. In all of these respects and more, Kant's moral philosophy will be found to possess singular advantages. These will be explored in subsequent chapters.¹⁰⁷

¹⁰⁷ For the sake of brevity this chapter has omitted or downplayed issues and theories that could well have been brought into consideration. The emphasis on consequentialism superseded consideration for theorists such as John Rawls and Jurgen Habermas, both of whom have been seen as inheritors of the Enlightenment tradition (Rawls for his advocacy of rational life plans for individual agents, Habermas for his support of public discourse at a high level of rationality.) Both have a strong empiricist orientation and thus support ideals of rationality as vested in communities, which in turn leads them to put considerable faith in the power of these communities to maximize material benefits without due consideration for the types of structural issues raised in this chapter. As a result both of them minimized the significance of states of affairs (Rawls in his critique of utilitarianism; Habermas in his advocacy of discourse ethics) and instead, drawing on Kantian traditions, emphasized the rights and obligations individual agents owe to each other.

Moreover, it should not be inferred that acting into markets and nature are not the only or even the principal elements of structural transformation. Such changes can occur naturally in response to technological and industrial advances that lead to greater complexity, which in turn leads to greater uncertainty. Triffin's Dilemma (the structural difficulties resulting from the adoption of one national currency as an international reserve currency and the tensions created thereby between national and international policy orientations) would be one example; moral hazard (addressed earlier in this chapter) would be another. Theorists ranging from John Hobson and Hyman Minsky in economics to Joseph Tainter in anthropology and sociology have analyzed the mechanics of such structural changes. However, these two forms of systemic transformations can interact with each other in ways that support the analysis set forth in this chapter. The case of subprime mortgages does exemplify "acting into markets," and led in turn to the weakening of capitalization levels of major European banks that bought securitized mortgage products. This weakening and the concomitant necessity to recapitalize these banks left them and their supporting institutions less able to face the current sovereign debt crisis now afflicting European banks, a debt crisis that could be seen as an example of more natural structural transformations. (Thus, the decision of European nations to forge a currency union without any mechanisms of fiscal support between nations created the propensity for peripheral Euro nations to issue low interest bonds denominated in euros that in turn created systemic weaknesses that became manifest when economic conditions in the EU deteriorated.)

CHAPTER 3: KANTIAN ETHICS AS A RESPONSE TO THE ENLIGHTENMENT

Introduction

In the previous chapter it was seen that the Enlightenment project achieved remarkable successes over the course of three centuries in building material wealth as a solid foundation of social prosperity. The successful distribution of this wealth to all levels of Western societies did in fact result in stunning advances in standards of public health and education, and so the second plank of the Enlightenment program, the building and nurturing of social and democratic institutions as the basis of popular democracy, became a viable ideal.¹⁰⁸ Driven by its two central assumptions – the unrestricted use of reason and scientific methods to build wealth and the reliability of systemic market structures to transform private vices into public goods – the Enlightenment ideal became deeply embedded in the foundational beliefs of Western civilization.

As was argued in the previous chapter, the ideal became so deeply embedded that the momentum of accumulating problems went largely undetected or unaddressed. Private agents and public institutions became less adept at anticipating morally unacceptable outcomes of market practices; companies fixated on feasibility costs became less focused on social costs; unaddressed problems were pushed into the future in the rush to meet short term profit projections – and these problems are now increasingly crowding into the present. To a considerable degree, this can be explained by changes to the process of scientific discovery itself. As modern technological civilization became more complex, the relationship between science and business became increasingly sophisticated. The process of scientific discovery became transformed: prior to the

¹⁰⁸ The most significant success could be attributed to mid-nineteenth century British programs of public health and sanitation that resulted in the building of hospitals, the establishment of standards for London's water supply, the success in eradicating urban outbreaks of cholera and other diseases.

eighteenth century, science was concerned primarily with marshaling natural forces – and pure science dominated practical science. The industrial revolution brought science and business into a burgeoning alliance and with it went a greater focus on scientific theory aimed at the magnification of natural forces. By the middle of the twentieth century, scientists gained an increasing capacity to “act into nature,” a capacity to alter the very constituents of natural entities and forces, and with it came the dominance of business and practical science, with theoretical science increasingly tied to the achievement of profit objectives.¹⁰⁹

As a consequence of these enhanced scientific capacities, externalities increased and became magnified in terms of their potential for serious impacts. The Enlightenment assumptions – especially the second – deteriorated into simplistic and anachronistic methods for understanding these problems.¹¹⁰ In spite of this, ethics became increasingly

¹⁰⁹ In fact the self-destructive tendencies of civilizations can be traced far back in time, a subject that has attracted many recent anthropological studies. Academics and researchers such as Jared Diamond and Ronald Wright have documented the collapse of ancient societies such as the Anasazi, Easter Islanders and the Mayan as attributable to failures to anticipate serious environmental or ecological problems because of deeply entrenched patterns of social authority or practices that inhibited effective recognition of problems and potential threats. Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking, 2005). Ronald Wright, *A Short History of Progress* (Toronto: Anansi Press, 2004). Both Wright and Diamond draw analogies to modern civilizations and the failure to respond to problems such as resource depletion, global warming, overpopulation, etc. The focus of this dissertation will be centred on the nexus of science and business as this has evolved from the Enlightenment through the period of the industrial revolution and into the twentieth century. While not disputing the claims of Diamond and Wright it will be asserted that changes in the process of scientific discovery are uniquely significant.

¹¹⁰ Many economists and economic historians have opposed the current free market wisdom that Say’s law can be effectively revived through “supply side” techniques such as tax cuts and deficit spending, a wisdom that came into general acceptance in the U.S. with the Reagan administration after 1981. M. A. Bernstein has drawn a parallel between the Reagan tax cuts (the benefits slanted to the wealthiest Americans), which were accompanied by a massive increase in defense spending and a concomitant rise in national debt, with the tax cuts of George W. Bush (similarly slanted to the benefit of the wealthiest Americans), which went with the 2003 invasion of Iraq (and the hundreds of billions of expenditures the war has entailed) and a similar rise in deficit spending. Bernstein goes on to denounce “the rightward turn of American politics” as responsible for the “regression” of professional economics: “A kind of naïveté coupled with unbridled enthusiasm had propelled the discipline’s leading lights to make claims on its behalf it could not redeem.” Michael A. Bernstein, “Cold War Triumphalism and the Deformation of the American Economy,” (126-145) in *Cold War Triumphalism: The Misuse of History After the Fall of Communism* Ellen Schrecker, ed. (New York: The New Press, 2004), 135. For an updated critique cf. Jonathan Chait, “Captives of the Supply Side,” (editorial) *New York Times*, October 9, 2007.

marginalized as a tool of analysis, limited to an instrumental role in challenging the standard paradigm or bridging the diverse areas of scientific specialization. Left to its own empirical and materialistic devices, scientific rationality – by definition a normative concept – became increasingly conflicted in the results it produced. In particular, the conflicts that emerged between the precautionary and proactionary principles – reflecting the growing gap between the principles of sustainability and the imperatives of economic growth - were highly formal in nature and thus not easily addressed by consequentialist theories. Intellectuals such as Thomas Homer-Dixon began to speak of an ingenuity gap - the failure of science to provide solutions to problems when needed - as well as the dire consequences of failure.¹¹¹

The Enlightenment paradigm and its twin assumptions became largely ineffectual; however, there was strong resistance against facing this reality. In part this was due to the growing preeminence of free market economics and its monetarist approach. Positive economics became more dichotomized from normative economics, and with it a greater emphasis on the rigor and mathematization of the former.¹¹² Interestingly, this division between the positive and normative also characterizes the division between the twin assumptions: the application of human reason and the scientific method to issues of augmenting material wealth is deemed to be founded upon factual considerations; the

¹¹¹ Homer-Dixon notes that a significant contributing factor to the ingenuity gap can be located in the unrelenting optimism of economists and free market advocates in the face of clearly established examples of the precautionary principle that can be elaborated from issues such as global warming or resource depletion. “Economic optimists not only place great faith in markets, they also place great faith in that ingenuity-producing powerhouse, modern science. They argue that our scientific practices and institutions – especially when directed and energized by free markets – are largely responsible for our societies’ extraordinary flexibility in the face of resource scarcities and other technical challenges.” However, as Homer-Dixon goes on to note, the scientific response has not been commensurate with the need. “Economists are not keen to acknowledge that technology solves some problems faster than others.” Homer-Dixon, *The Ingenuity Gap*, *op cit.*, 247, 251.

¹¹² John Kenneth Galbraith resisted the growing tide of positivism in economics in the 1950’s and 1960’s. A history of this confrontation is provided in Richard Parker: *John Kenneth Galbraith: His Life, His Politics, His Economics* (New York: Farrar, Straus, Giroux, 2005), 222 – 250, 273 – 310.

transformation of private vices into public goods through the aegis of competitive markets is based on normative considerations. The role of ethics became marginalized in no small degree because the first assumption required the direct application of consciously directed, scientific reasoning, while the second, normative assumption was thought to function automatically through structural means and largely without direct intervention. This was the basis of historical market concepts such as the “invisible hand” and “laissez-faire.”¹¹³

The first line of defense against externalities and the growth of social costs are the businesses and corporations that license the utilization of complex science. However, they are often incapable of anticipating morally unacceptable outcomes because of the intense and ongoing pressure to achieve profit objectives and satisfy their fiduciary responsibility to shareholders. Corporations are frequently given to see themselves in a survival mode and thus more often have a greater focus on cost-cutting rather than on anticipating and addressing social costs. They are thus more given to lobbying agencies of government for the benefits of deregulation or business promotion and more resistant to the legitimate role of government in legislating and regulating market activities in order to meet its public policy mandates. Government agencies in turn find themselves increasingly burdened by the need for more complex regulation and the expense of procuring the expertise needed to make such regulation effective.

¹¹³ As Ellen Frankel Paul notes: “Political economy in the early days, especially with Adam Smith, assumed an intimate connection between pure theory and questions of governmental intervention in the economy, and moral suppositions were inextricably bound up with the deduction of economic principles.” As Paul notes, quoting from Smith’s *Lecture on Justice*, Adam Smith did not adhere closely to the empiricist view established by John Locke that life, liberty and property are closely linked natural rights. Rather, Smith regarded property as “an acquired right, dependent upon the sufferance of society,” which aligns his view more closely with Kant’s concept of the reciprocity of state and property. Ellen Frankel Paul, *Moral Revolution and Economic Science: The Demise of Laissez-Faire in Nineteenth Century British Political Economy* (Westport, Conn.: Greenwood Press, 1979), 22, 282.

The last line of defense is civil society, which bears the ultimate responsibility for addressing morally unacceptable outcomes of market activity; however, citizens are in many respects trapped in a more difficult situation than the governments they empower to address these issues. Citizens lack the institutional organization and coercive authority of government, as well as the power to command the expertise necessary to confront business organizations. Longstanding intellectual debates have been conducted over the question of civil participation in public policy decisions that engage highly technical issues.¹¹⁴ Citizens themselves are often torn between their dual roles as citizens and consumers. The corporations they are to confront exercise significant control over mass media outlets and are just as concerned with exercising their influence over citizens as over government agencies.¹¹⁵ Non-governmental agencies (NGO's) thus have a crucial role to play in addressing these problems and representing citizen interests.

The central concern left by Chapter 2 that must be addressed in Chapter 3 is the question of the appropriate ethical theory needed to address these issues. Clearly, this will have to be an ethical theory that is not easily consigned to an instrumental role in supporting empirically based economic programs. It must be fully capable of questioning the second assumption and the automated structural functions of social and political

¹¹⁴ In the 1920's intellectuals such as Walter Lippmann and John Dewey debated the power of common men to participate effectively in a modern industrial state. Dewey argued in favour of the proposition, noting that the average citizen is best qualified to describe the impact of modern problems. Lippmann, growing more disenchanted with Dewey's Pragmatist philosophy, argued that the industrial revolution had fully undermined the power of small communities and had created a "world-wide economy of interdependent specialists." Dewey's arguments are summarized by Hilary Putnam. *Ethics Without Ontology* (Cambridge, Mass.: Harvard University Press, 2004), 105. Lippmann's arguments are summarized by Hari N. Dam, *The Intellectual Odyssey of Walter Lippmann: A Study of His Protean Thought (1910 – 1960)*. New York: Gordon Press, 1973), 59 – 65. More recently, the issue has been taken up by Conrad Brunk, the former dean of Grebel College and head of University of Victoria's Centre for Studies in Religion and Society. Cf. P. Pitts, "When Science and Ethics Collide," *The Ring (University of Victoria)*, September 19, 2002.

¹¹⁵ Cf. Robert A. Hackett, "News Media and Civic Inequality," (197–212) in *Democratic Equality: What Went Wrong?* Edward Broadbent, ed. (Toronto: University of Toronto Press, 2001).

institutions designed to leave market activity relatively unimpeded. It must be capable of challenging the standard market paradigm and all of its normative assumptions. It must be capable of identifying regulatory controls that apply across various areas of scientific specialization and establishing duty-oriented motivations that create commitments to these public institutions capable of overriding those of private interests. It will be argued in Chapter 3 that Kantian ethics is best capable of undertaking these responsibilities and is less beholden to the Enlightenment paradigm.

Kantian ethical theory holds a number of advantages in this regard, advantages that will be explained and developed over the course of this chapter. First, and most crucially, Kantian theory is unique in its denial of empirical foundations for ethical approaches. Its central concern is the division of duty from inclination, based on a strongly libertarian view of free will that stipulates a strong metaphysical connection between the concepts of freedom and morality. This reliance on metaphysics made all aspects of Kantian philosophy deeply unpopular throughout the twentieth century;¹¹⁶ however, the increasing doubts that have been cast on strictly empirical approaches to rationality – doubts exemplified by the “ingenuity gap” – mean that metaphysics need not be fatal to any ethical theory. Kantian theory is thus opened to a fresh re-examination.¹¹⁷

¹¹⁶ A good summary can be found in James O’Shea, “Conceptual Connections,” (513-526) in *A Companion to Kant*, ed. Graham Bird (Oxford: Blackwell Publishing Ltd., 2006).

¹¹⁷ Peter Strawson opened the door to a reconsideration of Kantian metaphysics in his work in the late 1950’s and early 1960’s. Strawson rejected transcendental idealism (which was revised and reformulated in a more empirical direction by Henry Allison in the 1970’s and 1980’s), but accepted and applied transcendental arguments (a term not specifically used by Kant, but which was the basis for his reasoning in the refutation of idealism in the *Critique of Pure Reason*). Cf. Peter Strawson, *Individuals* (London: Methuen, 1959) and *The Bounds of Sense* (London: Methuen, 1966). See also Henry Allison *Transcendental Idealism: An Interpretation and Defense* Revised Edition (New Haven: Yale University Press, 2004). A recent and highly comprehensive review of the metaphysical revival in Kantian ethics and political theory is found in *Politics and Metaphysics in Kant*, eds. Sorin Baiseau, Sami Philistrom and Howard Williams (Cardiff: University of Wales Press, 2011).

Second, Kantian ethical theory is strongly based – through metaphysics – on the concept of autonomy. Kant invests the individual agent with moral sovereignty, the ultimate authority for adjudicating issues of right and wrong through what he terms “pure practical reason.” In this, Kant follows in the Enlightenment tradition of investing rights in the individual, and he thus stands opposed to the subsequent communitarian theories that were initiated with Hegel. In its application to problems raised earlier, Kantian theory would thus regard the role of the individual agent as paramount, and the agent’s role as citizen would clearly trump that of consumer. Yet Kant never loses sight of the role of community and says we are categorically compelled to enter into civil society.

Finally, Kantian theory is important in its rejection of the Enlightenment tenet of unrestrained progress: material progress is an ideal, but it must be encompassed within a larger program for the perfection of laws and civil institutions. For this reason, Kant would see the second assumption of the Enlightenment paradigm as far more important than the first. In his view it is crucial to exercise direct and ongoing conscious rationality over the normative dimensions of the market, over issues of political economy and distributive justice. For this reason, practical reason must be privileged above theoretical reason, and thus the unleashing of human reason through the scientific method is a process that must be carefully monitored and controlled. The inability to do this has resulted in the failure of civil society to exercise appropriate control over its own institutions: a failure, in short, of the autonomy that individual agents are categorically compelled to exercise.¹¹⁸ Although the Marxist term “alienation” was coined long after

¹¹⁸ In the preface to his study of Kantian ethics, Allen Wood raises the interesting point that modern political and economic trends exemplified by globalization and the conservative turn in U.S. politics justify a return to the ideal of the Enlightenment and that Kantian principles represent the best way to achieve this ideal, in spite of the disparities that exist between Kant and the standard Enlightenment worldview. He

Kant's death, it serves almost as the antithesis to Kant's concept of autonomy, indicating the dissociation that individual agents in the modern world feel with respect to their inability to anticipate morally unacceptable outcomes.

The remaining sections of this chapter will take a broad perspective of Kantian ethical theory. Beginning with the reasons for Kant's rejection of the Enlightenment paradigm,¹¹⁹ it moves into a more detailed examination of his principles of autonomy. Chapter 4 will then analyze the metaphysical dimensions of the theory.

General Overview of Kantian Ethical Philosophy

Establishing the importance for any Kantian program of ethics depends to a certain extent on how the eighteenth century project of the Enlightenment is understood as having fulfilled its potential in the modern world. Unleashing the power of scientific investigation and educating men towards the realization of this potential has, as noted in the previous chapter, been long established as the foundation of all human progress. Kant himself played an important role in this project,¹²⁰ and to the extent that elements of Kant's ethical theory continue to find favor today, it is on the basis of his belief in the possibility of progress based on a scientific rationality that demands the implementation

notes that "the social, political, and intellectual climate of my country [the United States] (and therefore of the globe over which it tyrannizes) has grown blinder, nastier, more irrational." He believes that we need to return to Kant's "stern, moralistic insistence that people must subject their ways of thinking to rational criticism" in line with "Kant's sober, principled hope for a more rational, cosmopolitan future." Thus, "we need to recapture an authentically Enlightenment conception of the human condition." Allen Wood, *Kant's Ethical Thought* (Cambridge: Cambridge University Press, 1999), xiv – xv.

¹¹⁹ For a comprehensive examination of Kant's relationship with the Enlightenment, see Katerina Deligiorgi, *Kant and the Enlightenment* (Albany: State University of New York Press, 2005).

¹²⁰ Kant's most notable contribution was his essay "An Answer to the Question: What is Enlightenment?" [Ted Humphrey, trans. in *Perpetual Peace and Other Essays* (Indianapolis: Hackett Publishing Company, 1983), 41-48.] Kant offers not only a defense of the key Enlightenment tenet of freedom of thought, but also a manifesto for the importance of responsible thought, which Kant understood as "the freedom to use reason publicly in all matters ... the use a scholar makes of reason before the entire literate world." (42).

of laws, rules and regulations as conditions of success.¹²¹ Disagreement is generated because of Kant's efforts to place the Enlightenment in a larger metaphysical context, one in which scientific progress is not to be pursued merely for its own sake and as the basis for all social good.¹²²

At the outset of the Enlightenment, John Locke established his social contract theory on the basis of his claim that man could leave the state of nature and enter into the Commonwealth through an exercise of reason in which human duties could be reconciled with human inclinations. The Enlightenment took up the cause of reason in the service of this progressive understanding and mastery of nature. To the extent that nature was the source of all human problems of survival and well being, the power of reason had to be granted the unrestricted means to pursue scientific programs bent on reconstructing the natural world towards the achievement of human objectives. The discipline required to enhance and perfect the scientific method constituted the primary domain of human duty; the successes of science in this endeavor would satisfy material desires and inclinations. As scientific knowledge and practices become more complex and sophisticated, the discipline thereby imposed on human reason has a civilizing effect. Social and political institutions based on laws and the rights of men follow naturally from the application of

¹²¹ The value of Kantian ethics in this regard is well articulated by Hilary Putnam: "Taking Rules Seriously," (193 – 200) in *Realism With a Human Face* (Cambridge, Mass.: Harvard University Press, 1990). Landmark positions taken against Kant in this regard were articulated by Philippa Foot and G.E.M. Anscombe in the 1950's. Anscombe in particular was influential in arguing against intrinsically moral conceptualizations of duty and obligation that are derivative from outmoded religious doctrines. On this view, both natural law and Kantian theories are rejected, since legal conceptions of ethics are seen as derivative from divine command approaches. (G.E.M. Anscombe, "Modern Moral Philosophy," 1958)

¹²² The basis of this metaphysical context is transcendental idealism, which Kant elaborated in the *Critique of Pure Reason*. Kant separated the (phenomenal) world of appearances from the noumenal domain that constituted the "thing-in-itself" as this applied to all phenomenal entities, including the self of all rational beings. We are denied positive knowledge of the noumenal domain, except as the basis of moral action.

the scientific method, and the means can thus be found to transform private vices into public virtues.¹²³

Kant was thus highly prescient in rejecting this enlightened optimism and in anticipating the possibility that a purely empirical basis of progress would produce difficulties of the kind outlined in the previous chapter of this dissertation. Ted Humphrey puts the matter concisely:

Kant stands outside the main thrust of Enlightenment thinking, rejecting the view inherited from Descartes and Locke and almost universally held by Enlightenment thinkers: that the key to the core of mankind's advancement is increase of knowledge. Where other Enlightenment figures such as Locke, Voltaire, and D'Alembert argued that increase of knowledge would, on the one hand, provide fuel for driving the machine of man's technological mastery of the environment, thereby improving the material conditions of his life – and, on the other, reduce superstition and intolerance by casting religious and moral differences in a clearer light, thus freeing society of destructive fanaticisms – Kant saw increase of knowledge in and of itself to have no such beneficial effects. Though belief that knowledge is intrinsically empowering and salvific is something of a philosophical credo – one originating with and most convincingly argued by Plato – Kant regards knowledge as no more than a means to an end. Unless knowledge can be put in the service of appropriate ends, it cannot truly benefit individuals or society. For Kant, then, such enlightenment as derives from merely scientifically applicable knowledge is subordinate to enlightenment of a moral nature.¹²⁴

Kant certainly did not start his philosophical career with these beliefs. As a young scholar he was devoted to Newtonian science and believed that metaphysics could gain credibility if it could be made coextensive with the new methods of scientific verification and avoid the speculation of rationalist philosophers. Through a close reading of Rousseau's discourses on arts and sciences and the origins of inequality, Kant changed his mind, agreeing with Rousseau's view that the acquisition and implementation of

¹²³ An analysis of the relationship between natural law and social contract theories within the framework of the growing scientific efficacy of commercial societies (in the context of Adam Smith's postulation of free and unencumbered markets) is found in Istvan Holt and Michael Ignatieff, "Needs and Justice in the *Wealth of Nations*: an Introductory Essay," (1 – 44) in *Wealth and Virtue: The Shaping of Political Economy in the Scottish Enlightenment*, Istvan Holt and Michael Ignatieff, eds. (Cambridge: Cambridge University Press, 1983).

¹²⁴ Ted Humphrey, "Translator's Introduction," to *Perpetual Peace and Other Essays*, *ibid.*, 1.

scientific knowledge within a social framework did not automatically result in the ennoblement of human virtues, but could, on the contrary, promote the corruption of the human spirit. Rather than providing the means for satisfying basic needs of all men, arts and sciences created new desires and exclusive luxuries that could only be satisfied through the promotion of human inequality. Reason is no longer the most noble of human attributes but an accomplice in the corruption of man, whose progression out of the state of nature and into the commonwealth is no longer rational and linear, but deeply problematic.¹²⁵ Man's true duty was not to perfect the scientific method, but to live in accord with nature – and this would mean exercising duty against inclinations that could find corrupt means of satisfaction within human society.

While Kant agreed with Rousseau's analysis, he could not accept Rousseau's conclusions that human salvation had to be recovered through feelings and sentiments directed towards a unity with the natural world. Kant insisted that reason was still the key to human ennoblement, but it could no longer be achieved through any empirical method or scientific worldview. Reason must have a separate, metaphysical dimension through which the authority of human duty could be asserted against inclinations. Reason must have the power to assert moral direction over any scientific project, but to gain such authority it would have to be freed from its "means-to-ends" enslavement to the passions. Such authority could not be found through the power of material possessions or

¹²⁵ The conflict between nature and culture was accepted as inherent by early social contract theorists. While Locke accepted as uncontroversial the imperative of human commonwealths to master nature to procure human needs, Rousseau was the first to claim that this process had a corrupting effect on human nature, a thesis that was a forerunner of much Romanticist thinking that followed. Kant was unique in his reluctance to accept the conflict between nature and culture as inevitable, and much of his later thinking, especially in the *Critique of Judgment* was aimed at overcoming this divide. Allen Wood makes the crucial point that Kant believed that "Rousseau never meant us to go back to the state of nature but only to look back at it from the perspective of the condition in which we now find ourselves," i.e., the condition of the constant effort to perfect laws and constitutions through pure practical reason. (Wood, *op cit.*, 293.)

scientific knowledge, but through the capacity to determine universal law and categorical principles, a power that must be equally accessible by all men. Such a reason, Kant concluded, must have an a priori dimension; it must determine laws for action that are not in any way derived from empirical human experience. As Lewis White Beck notes:

[Laws of nature] in their theoretical formation may be necessary, but when formulated as practical rules, they are always contingent upon there being in us the desires which can be satisfied through successful applications of our knowledge of them. If there is an unconditional practical law, it could only be discovered by a reason that is intrinsically practical, and not by a theoretical reason which is only extrinsically and contingently practical, i.e., one issuing laws that may or may not be applicable in practice, depending upon the desires and the situation. Such an intrinsically practical reason is called pure practical reason.¹²⁶

This development of an a priori authority for reason was unique and original with Kant. Plato had argued for the metaphysical sources of morality, but locked them into the epistemology of the forms, which could only be accessed and interpreted for citizens by an elite group of philosophers. Aristotle had separated theoretical from practical reason but argued that they were fully compatible within social and political experience. Rousseau divided duty from inclination, but reconciled them through the metaphysics of “the general will” that could be interpreted and applied by government authorities.¹²⁷ Kant argued that there was such a thing as a “holy will,” one whose internal deliberations automatically carried nomological force, but such a will could never be replicated by men. Rather, authority was vested in individual human agents to determine universal principles through the categorical imperative, and thereby bring their collective

¹²⁶ Lewis White Beck, *A Commentary on Kant's Critique of Practical Reason* (Chicago: University of Chicago Press, 1960), 40.

¹²⁷ An account of the process by which Kant began to develop pure practical reason as a conceptual response to Rousseau's two discourses (on Arts and Sciences, and on the Origin and Basis of Inequality Among Men) is provided by Frederick C. Beiser, “Kant's Intellectual Development: 1746-1781” (26 - 61) in *The Cambridge Companion to Kant*, Paul Guyer, ed. (Cambridge: Cambridge University Press, 1992). An insightful account of Rousseau's place in the history of social contract thought, his subsequent intellectual engagement with Kant and the place of both in the spectrum of Enlightenment thinking is found in Allan Bloom, *The Closing of the American Mind* (New York: Simon & Schuster, Inc., 1987), 157-193.

determinations of such laws into a civil organization from which political institutions could be derived. The social contract for Kant is thus never a charter of whatever empirical agreements of interests humans may be able to achieve, but a test of the credibility of the institutions and principles that they collectively implement. Thus, for Kant, history is never the progress of material gains, but the progress of laws and institutions towards gradual perfection over the course of many generations.¹²⁸

Kant granted pure practical reason a vast domain of thought and deliberation. The individual human agent was not merely to focus his concerns on his own private range of actions in his personal life (although Kant's doctrine of virtue does constitute an important element of his overall moral philosophy), but on the vast, universal, multi-generational scope of human destiny. Ironically, Kant's purpose was not to expand the speculative power of human reason but to limit its use. Reason was a powerful and ennobling tool exactly for the reason that there are limits to what man can know and even limits to what man can do. Beyond these possibilities of knowledge and action there is hope, and Kant believed that men were categorically compelled to believe in God, in freedom, in the possibility of an afterlife in which human virtues could be perfected. Eighteenth century science had opened knowledge of the cosmos, of the laws of chemistry and of microscopic organisms; beyond this was a realm of moral knowledge.

From both a religious and a scientific perspective, it seemed appropriate to fix man's place in the universe and then determine what course of practical action was most appropriate. The power to determine such a course would thus have to be granted to the priests and/or the natural philosophers who comprehended how this universe functioned

¹²⁸ Kant elaborates these positions in a number of different essays, principally "The Conflict of the Faculties," (1798) "Conjectural Beginning of Human History" (1786) and "Idea for a Universal History with Cosmopolitan Intent." (1784)

and how men should behave within it. Kant turned this order around and made man's place in the natural order dependent upon on the universal laws that governed his behavior. Each individual human agent held the sovereign moral authority to legislate on his or her own behalf and to subject actions to the rule of a reason that was "intrinsically practical." From this self-understanding as a law-governed agent would follow the awareness of one's place in the universe. Kant would need the full metaphysical force of pure practical reason in order to make this philosophical project a success. Granting theoretical reason authority over practical reason necessitated an Aquinean approach based on natural law and a designated religious and political authority by which such laws and duties were to be understood by common men. If the empirical domain were all that existed, then such authority could not be legitimately challenged. But the need for universal principles to guide action and for faith in an afterlife that would give hope for the possibility of fully justifying happiness through virtue gave each private agent a sovereign power that could not be superseded by such authorities. Kant, through pure practical reason, granted moral sovereignty to the individual agent, and made the agent the foundation of all subsequent political and institutional authority. In both social and religious matters, the autonomy and freedom of each human agent was irrevocable and incorrigible.¹²⁹

¹²⁹ This synopsis covers a long process of evolution in Kant's thinking. The *Critique of Pure Reason* is the foundation of Kant's philosophy and provided an initial account of the possibility of human freedom and synthetic a priori propositions. Its concluding section, "The Transcendental Doctrine of Method" outlined the basis for a project of hope based upon the collaboration of theoretical and practical reason, but left important ethical issues unaddressed. Kant takes on the challenge to develop a moral philosophy in the *Groundwork of the Metaphysics of Morals* and the *Critique of Practical Reason*, which set forth the central concepts of Kantian ethics: the good will, the categorical imperative, freedom and autonomy, pure practical reason. The third critique, the *Critique of Judgment* is important for its attempts to establish teleological grounds for aligning the ends of the natural world with those pertaining to the perfection of the human species. (This concern was reiterated in the writings collected in the *Opus Postumum* after Kant's death.) Kant's beliefs in the development of the human species through the perfection of law over the course of

If Kant is correct, then the grounds for vindicating his ethical theory should be apparent in the history of business and science – as well as in the history of politics, wars and ideas – as these have evolved in the two hundred years since Kant’s death.¹³⁰ If the standard view of Enlightenment is correct, we should be able to determine broad patterns of empirical progress through history, progress based on the structural integrity of free market and institutional processes that transform private vices into public good, that promote overall systemic stability and yield a clear program for future progress. The authority of natural law and its sovereign exercise by political leaders and scientific experts should be reasonably clear. The improvement of laws and institutions over the course of many generations, the key plank in Kant’s program, should be the effect of increasing scientific complexity and sophistication. It should not require the direct application of reason by individual citizens as Kant claimed.

In the remainder of this chapter, many central themes of Kant’s moral philosophy will be set forth that have explicit applications to business, law, science and institutional control. They also have an explicit historical dimension that should yield evidence of

many generations is set forth in many essays: “To Perpetual Peace,” “Idea for a Universal History With Cosmopolitan Intent,” “Speculative Beginning of Human History,” and “The Conflict of the Faculties.” His theories of law, politics, justice and social contract are set forth on the *Metaphysic of Morals*. The imperative for moral reasoning to seek the grounds for rational religion is covered in *Religion Within the Limits of Reason Alone*. All of these can be supplemented by the many compilations of lectures Kant gave at the University of Königsberg, including lectures on ethics, logic, physics and rational religion.

¹³⁰ It should be pointed out that opposition to Kant came not only from 19th and 20th century positivists but from historicists as well. Hegel’s dialectics were based in part on rejection of Kant’s moral philosophy as well as the ahistorical principles Kant advocated. These elements were carried into both Anglo American philosophy (by John Dewey) and continental philosophy and formed the basis of many strands of late 20th century philosophy. Alisdair MacIntyre characterized as “undeniable fact” the claim that “the subject matter of moral philosophy, at least – the evaluative and normative concepts ... - are nowhere to be found except as embodied in the historical lives of particular social groups and so possessing the distinctive characteristics of historical existence.... Morality that is no particular society’s morality is to be found nowhere.” Alisdair MacIntyre, “The relationship of philosophy and history: Postscript to the second edition of *After Virtue*,” in *After philosophy: End or transformation?* eds. Kenneth Baynes, James Bohman, and Thomas McCarthy. (Cambridge: MIT Press, 1987), 413.

either progress or retrogression. At the conclusion, Kant's ethical theory will be revisited and a fuller case for its vindication will be set forth.

The Metaphysics of Autonomy as the Basis of Kantian Ethics

The argument to this point could be summarized as Kant's rejection of any system of structural or institutional controls upon which agents could rely in a way that overrides the exercise of individual reason. Kant would not consent to a market system or any moral and political philosophy in which the focus of consciously directed reason was placed upon the exercise of theoretical reason – i.e., on the application of the scientific method to generate material prosperity¹³¹ – while crucial elements of practical reason affecting distributive justice – the reliance on private enterprise to generate public benefits – could be put on automatic pilot. While Kant agreed with the broad perspective of the Enlightenment program, including the belief in ongoing material progress, he disagreed with its thoroughgoing scientific perspective, one that reached into the domain of human psychology to place a strong reliance on “moral sense” or benevolence as the predominant and emotive engines of human behavior. His agreement with Rousseau with respect to the power of social forces to transform the Enlightenment dream into a destructive nightmare meant that reason could not be the slave of the passions; we cannot

¹³¹ It is significant that where Kant does take note of market activity, he grants a broad range of approval to localized markets that are closely attached to the community (as in the “honest tradesman” example in the *Groundwork*) while condemning exploitative practices of colonialism that occur on the international stage (e.g. the “entire litany of evils” imposed on colonial populations that violated the principle of “universal hospitality” described in “Perpetual Peace”). Norman Bowie makes the important point that because Kant visualizes a universal community that makes perpetual peace possible, an external vantage point outside the community or nation state is always available to facilitate rational criticism of market activities within it. “What is of most concern to Kant is the universal human community. The internal activities of a state are subject to moral criticism from those outside it and the citizens of any given state may have obligations that extend beyond national boundaries.” Norman Bowie, *Business Ethics: A Kantian Perspective* (Oxford: Blackwell Publishers Ltd., 1999), 149.

rely upon empiricist promises that antecedent mental states will be the deterministic cause of desirable behavior. For Kant human intentions were the consequence of a free will that had to have its origin outside of the external forces of nature that were deemed to be the ultimate source of decisions.¹³² Rational action was the result of consciously directed choices taken every step of the way with the full force of reason behind them.

The paradigmatic Enlightenment theory for an automatic structural function was that applied to “laissez-faire” market operations by Adam Smith. The “invisible hand” provided the means by which private vices would be transformed into public goods through the economic contributions of agents motivated by rational preferences. Like other Enlightenment philosophers, Smith’s focus was centered on individuals empowered by rights to gain the benefits of their labor in agriculturally oriented economies within which a productive merchant class could prosper. Agents brought together on the basis of individual freedom and their own economic contributions would thus provide a tightly interwoven net of social relationships. Smith’s cohesion model, based on his “nation of shopkeepers” concept, was built on the principle of well balanced social, political and economic forces, with markets generally well contained by just social, legal and political

¹³² This claim should be put in the context of the empiricist/positivist trend in Kant scholarship over the past fifty years that follows from Peter Strawson’s thesis in *The Bounds of Sense* (1966) that what is valuable in the substantive philosophy of the *Critique of Pure Reason* can only be extracted by detaching it fully from transcendental idealism, which Strawson regarded as expendable metaphysics. The “separability thesis” was attacked by Henry Allison in *Transcendental Idealism* (1983, 2004), which sought to fully vindicate the metaphysics of transcendental idealism. Prior to Allison, W. Michael Hoffman had attempted to fully justify Kant’s concept of freedom by arguing for the full continuity of Kant’s metaphysics throughout all three critiques. *Kant’s Theory of Freedom: A Metaphysical Inquiry* (University Press of America, 1978).

institutions. Free markets provided open access to trade in necessary goods for all citizens, a means to the end of active, fulfilling political participation.¹³³

Kant's principle objection to this approach was Smith's emphasis on materially-oriented motivations as the basis for personal morality and social participation. In this, Smith followed willingly in the tradition of British moral philosophy developed during the period of the Enlightenment which emphasized an empirical foundation for ethics. Most individual agents, endowed with rights that they could freely exercise without fear of political or religious persecution, would behave benevolently towards each other, and elevate the general level of social prosperity. Kant, under Rousseau's influence, believed that freedom defined in this purely empirical sense would lead to social corruption by enshrining private inclinations over the duties that citizens owed to the state.

For Kant, then, freedom could not be defined in terms of a capacity for physical action that was motivated by external pressures that originated in the natural world. Freedom was not a concept to be understood merely in empirical terms, for such freedom was determined largely by outside factors. Human behavior could be readily predicted and "invisible hand" theories could be facilitated, but for Kant it was simply not true that what one knows or what one feels ought to dictate the course of action to be followed. Since freedom demands the capacity for the rational deliberation of all decisions, it must be capable of making possible agent-directed decisions under which desires and inclinations are overruled by imperatives of duty. Freedom was thus unthinkable without

¹³³ Smith takes note of the greater "harmony of interests" created by market mechanisms that in turn build community strength by more greatly promoting justice and facilitating the cooperative relationships that the prospect of mutual benefits makes possible. Ellen Frankel Paul, *op cit.*, 28 – 29.

morality, and morality without freedom. Kant's concepts of freedom, autonomy and morality would thus require a metaphysical dimension and frame of reference.¹³⁴

Enlightenment thinking did not in itself lead to the rejection of Kant's project for a "metaphysics of morals;" Thomas Jefferson's wording in the U.S. Declaration of Independence made provision for men "endowed by their creator with inalienable rights." However, Kant was unique in recognizing that "inalienable rights" would not lead directly to human programs for securing "the pursuit of happiness." Again following Rousseau and rejecting empiricist claims on behalf of human benevolence, Kant argued that in following their natural inclinations, human agents were perfectly free to devise maxims, or rules of behavior that would contradict moral law, universally conceived. Human beings thus had a propensity for "radical evil," and so had to make constant and continual rational decisions to embrace duties that would overrule their natural inclinations. Kant explicitly rejected the notion of an "invisible hand" that would function automatically to direct human decisions towards virtuous consequences.¹³⁵

¹³⁴ The concept of freedom plays a very difficult role throughout all of Kant's philosophy, and only a brief account can be provided here. In the *Critique of Pure Reason* Kant establishes an antinomy between causality in nature and a causality through freedom that is spontaneous and undetermined. Kant argues for both sides of this position and is able to do so because of transcendental idealism, which facilitates both a noumenal and phenomenal understanding of our capacities as rational beings. This leads to Kant's preoccupation throughout all of his work to bring the concepts of nature and freedom into alignment. In his moral philosophy, Kant set forth differing positions in the *Groundwork of the Metaphysics of Morals* and the *Critique of Practical Reason* with respect to the reciprocal relationship between morality and freedom.

¹³⁵ The ethical theories of Smith and Kant contrast most explicitly over the issue of moral rationalism, specifically, Kant's belief that reason must be explicitly exercised to judge moral issues and to recognize the imperatives of duty that must motivate actions. As Kant's example of the honest tradesman makes clear, market forces can align incentives to create mutually beneficial results through prudent judgments, but true morality requires the rational recognition of specific duties that direct the imperatives of action. Smith's "invisible hand" tenet, by contrast, follows from the moral sense theory that dominated British empiricist thinking and is contiguous with Smith's view that men fall naturally into relationships of mutual cooperation that require no specific exercises of rational consent. Kant, on the other hand, believed that men had to consistently and consciously exercise moral reasoning because of their internal propensity to "radical evil," the capacity to deliberately choose maxims that violate moral law. This situation is reinforced by nature, which in Kant's view promotes man's exercise of reason, but "is utterly unconcerned that man live well, only that he bring himself to the point where his conduct makes him worthy of life and well being." (*Idea for a Universal History With a Cosmopolitan Intent*, in *Perpetual Peace*, op cit., - 20),

Given this view of autonomy and the burden of free will it entailed, the human agent is vested with moral sovereignty that cannot be delegated, any more than political sovereignty could be delegated in Locke's worldview. For Kant, as noted earlier, this meant that practical reason could not be instrumental. As in Aristotle, theoretical reason is clearly separated from practical reason, but unlike Aristotle, practical reason is given supremacy through the metaphysical weight of universal principles and the unconditional nature of moral law. Aristotle imagined exceptionally virtuous agents in whom duty and inclinations would meld in a natural alignment that made them fully worthy of political service.¹³⁶ For Kant, such a result is never to be achieved without an internal struggle with one's base inclinations that represents, if successful, a victory of the agent's reason in the effort to become transformed with respect to the achievement of a good will. Nature will not create the alignment.

Rousseau and Kant agreed that social proclivity to evil was a real problem and that corruption of the human character was a genuine danger that accompanied the advance of civilization. For Rousseau, these problems and dangers were a permanent fixture and could only be overcome through a return in thought to the natural innocence humans enjoyed in the state of nature. Kant's irrevocable commitment to rationality prohibited this ideal and directed human duty toward the onerous task of maintaining civilized progress. As noted earlier, private agents are the font of moral sovereignty, but they are categorically compelled by duty to form themselves into political and religious

31. From this follows Kant's belief in "unsociable sociability," which he defines as man's "tendency to enter into society, combined, however, with a thoroughgoing resistance that constantly threatens to sunder this society." (*ibid.*, (20), 31-32. Each human agent is morally compelled to overcome the "radical evil" within, and then once this conscious exercise of rationality is completed, a further duty to enter into a civil community is recognized, even though this violates one's natural inclinations.

¹³⁶ Cf. Aristotle, *Nicomachean Ethics*, 1325b14 – 13226b24. ("The Life of the Ideal State; The Nature of its Population.") excerpted from *Aristotle Selections*, W.D. Ross, ed. (New York: Charles Scribner's Sons, 1927), 310 – 312.

communities. Kant's vision of the social contract thus does not lie in any empirical agreement to restrain the agent's power of material acquisition, but is a test of citizens' a priori commitments to universal principles of political organization. No phenomenal description of human agency, autonomy or freedom can set forth the program for which the perfection of human character and forms of social organization were to be achieved. The metaphysics of morals Kant describes requires a "noumenal" dimension for which human freedom can be evidenced by way of actions executed in the material world by means of the will's own self-generated sources of causation.¹³⁷

Given that no one agent or group of agents can perfect law and social organization on their own, there must be a dimension of hope that transcends the domain of practical action and, as noted earlier, provides the basis of social commitment that exceeds the lifespan of any one person. If citizens then take a multigenerational perspective of their own civilization as a condition of possibility for their own citizenship, then they realize that their traditions, markets, political and social institutions do not exist for the merely empirical purpose of building community welfare. The project of civilization must be directed towards the enhancement and perfection of laws and institutions that must span the course of many generations and require a full dedication to rational thinking on the

¹³⁷ The term "noumenon" is introduced in the *Critique of Pure Reason* to describe the concept of entities as they are "in-themselves," which nonetheless falls outside of the domain of knowledge afforded by the faculty of understanding, since we have no immediate sense perception of such entities. In Kant's words, the understanding "is thereby led to hold the perfectly undetermined concept of an intelligible existence, a something outside of our sensibility, for a determinate concept of an existence which we can know in some way or other by means of the understanding." [B306]. We thus have an acceptable (for Kant) grasp of the noumenal in this negative sense (i.e., as a structural conceptualization that is fully intelligible) without claiming a positive knowledge of the thing-in-itself, given that knowledge is limited to the phenomenal. However, our grasp becomes more substantial when we cross into the domain of pure practical reason and become compelled to address the concept of freedom. As Kant notes in the preface to the *Critique of Practical Reason*: "Practical reason on its own and without having made an agreement with speculative reason, now provides a supersensible object of the category of causality, namely freedom, with reality; ... thus it confirms by a fact what in the speculative critique could only be thought." (6/9)

part of every individual agent.¹³⁸ If one's own civilization is involved in such a project, then all the world's civilizations should be similarly engaged. The perspective then shifts again: not just to one civilization or many, but to the rational development of the human species as a whole.¹³⁹

Human history thus cannot be understood empirically as a series of isolated events; it must have an ultimate meaning and purpose that is identified, considered and understood well outside the domain of material experience by a form of human reason similarly situated outside the domain of empirical events. The human species has the capacity to freely cause and initiate actions in the material world that are unconditioned by the experiential events of that world, given that they pertain to the objectives, purposes

¹³⁸ The mandate for hope is provided in "The Transcendental Doctrine of Method," the concluding section of the *Critique of Pure Reason*, where Kant first establishes the vocation of human reason as reaching well beyond the range of possible actions: to the perfection of private virtue after death and to the perfection of public laws over the course of many generations of human civilization. For Kant, hope "stands in precisely the same relation to the practical and the law of morality as knowing to the theoretical knowledge of things and the law of nature. The former arrives finally at the conclusion that something is (which determines the ultimate end), because something ought to take place; the latter, that something is (which operates as its highest cause), because something does take place." [A804/B832] Under the project of hope, theoretical and practical reason thus have to work together both to establish a cause and effect relationship between states of affairs (with respect to theoretical reason) while articulating a vision of states of affairs that do take place because they must take place to meet a given normative standard (with respect to practical reason). We gain a powerful purpose in life precisely because the impacts of our actions extend well beyond death into the afterlife in heaven and into the future of civilization on earth. "Without a God and without a world, invisible to us now, but hoped for, the glorious ideas of morality are, indeed, objects of approbation and of admiration, but cannot be the springs of purpose and of action." [A812/B840].

¹³⁹ In the *Idea for a Universal History with a Cosmopolitan Intent* (1784) Kant makes it clear that he sees a teleological objective in nature, whereby "all of a creature's natural capacities are destined to develop completely and in conformity with their end." (First Thesis: 18/30) In the case of man, these capacities are centred on the exercise of reason. But Allen Wood points out that this creates a continuity between biology and history in terms of creating a set of final ends and ultimate objectives that are achieved over the course of multiple generations. "Kant's philosophy of history is guided by a philosophical idea that understands the historical change as the development of the natural predispositions of the human race as a living species." (Wood, *op cit.*, 208.) This alignment of biology and history also accords with Kant's objective of dissolving the antagonism between nature and culture that united Rousseau with his opponents in social contract theory as a point of common agreement. The alignment also further cements the bond between the second and third formulations of the categorical imperative. The injunction to treat humanity as an end and never a means reinforces the biological imperative to perfect reason that aligns with the purposeful mandate to create the "kingdom of ends." The alignment of biology and history thus contributes to the alignment of nature and culture and thus makes Kant an advocate of sustainability two centuries before the term would acquire a practical meaning. Kant revisits this theme in the *Critique of Judgment*, where he argues that the organic unity of nature is fully contiguous with the human objective of moral perfection. ([84], 284-286.)

and meaning of human history. Moreover, if they have the power to initiate such events, then they also have the capacity to think and reason about the nature of such events in a way that is similarly unconditioned. For Kant, this is the essence of pure reason, and more specifically, pure practical reason. Much of Kant's critical philosophy is taken up with questions regarding the legitimacy of such exercises of pure reason; e.g., the extent to which reason can establish the proofs of God's existence or the substantial nature of the self, metaphysical issues for which he establishes firm barriers where theoretical reason is concerned. He does, however, grant pure practical reason much broader powers to legitimately establish the domain of ethical rationality through the metaphysics of morals. The objectives of establishing a multigenerational project for the perfection of law and civilization fall under the purview of the legitimate exercises of human reasoning and point to the power of the human species to establish its own self-directed teleology.

This metaphysical dimension of human rationality - this license and mandatory authority that Kant provides for the a priori exercises of pure practical reason – is what provides the a priori foundations and the conditions of possibility for human freedom and autonomy.¹⁴⁰ Human thought regarding these vital issues of purpose, meaning and

¹⁴⁰ There is a remarkable point of dispute between Kant scholars and Kant's critics over the metaphysics of autonomy and its impact on moral philosophy. For scholar H.J. Paton the absence of any metaphysical dimension would mean that we have been poorly served by nature, which would have done better to allow us to evolve complex instinctive responses to our world better able to generate happiness. For Paton this can lead to only one conclusion: "The true function of reason on its practical side must be to produce a will good not as a means to something else such as happiness, but good absolutely and in itself." H.J. Paton, *The Categorical Imperative: A Study in Kant's Moral Philosophy* (Philadelphia: University of Pennsylvania Press, 1947), 44. Bernard Williams, on the other hand, argues that moral agents cannot achieve moral goodness or impartiality in Kant's austere sense without compromising their private objectives or "ground projects" that are vital to the agent's very sense of self-identity. Williams disputes the possibility that we can reason outside of the parameters of our interests to the extent of deliberating anything resembling a "multigenerational project." In his view, practical reasoning is "first person, radically so, and involves an I that must be more intimately the I of my desires than this [Kant's] account allows." Bernard Williams, *Ethics and the Limits of Philosophy* (Cambridge, Mass.: Harvard University Press, 1985), 67. On the view taken in this dissertation thinking beyond our "ground projects" is absolutely essential in addressing

teleology originates in a noumenal realm outside the domain of material experience; it simply cannot be conditioned by whatever material considerations may be manifest at any given moment. This power of pure practical reasoning also falls within the purview of each individual agent exercising his moral sovereignty. Any constitution or set of contractual agreements may be written down and may claim to be community property, but they are also subject to the validation provided by rationally thinking agents at any given moment of time.

As noted earlier, this pure practical reasoning being exercised by rational agents is directed towards two large-scale projects, one political, the other religious. The first is the Kingdom of Ends, the program for perfection of laws and institutions ideally followed by all the world's civilizations and directed towards the achievement of perpetual peace for all nations. The second is the Kingdom of God, directed towards the salvation of each agent in an afterlife where the objective for perfecting virtue continues into eternity. For Kant these projects which necessarily entail the metaphysics of pure practical reason are essential for building social cohesion. It is thus not enough, on Kant's view, to rely merely on benevolence and human capacities for creating material values, in the manner of Adam Smith and the British empiricists. This does provide a valuable aspect of human autonomy expressed through the power of each market agent to be materially self-sufficient, to carry his or her own weight through objectives of self-reliance. Indeed, Kant himself argued that a principle of self-sufficiency is essential for social existence. But for Kant it is not enough. Self-reliance and market power, along with the self-confidence the agent gains as a consequence, are not sufficient to underwrite a perpetual

issues such as global warming or resource depletion, issues that demand the exercise of the precautionary principle and thus entail the exercise of good will and impartiality in Kant's sense.

benevolence that the empiricists believed was the basis of moral behavior. Following Rousseau, Kant saw the destructive and corrupting potential that such empirical power could introduce into social contexts. Only through a metaphysical dimension of freedom and autonomy required for pure practical reason could individual agents exercise their mandate of moral autonomy and place experiential events within a larger framework of human destiny aimed at nothing less than the rational perfection of the human species.

The difficulty with these foundations that Kant provides for human freedom and autonomy is the necessity of metaphysics, which is anathema to modern philosophers, ethicists included. Kantian scholars have grappled with these issues without interruption during the two centuries since Kant's death. Recent scholarship over the past thirty years has come to terms with the need for some acceptance of metaphysical foundations for ethics, overcoming objections of positivists and pragmatists that have dominated philosophy throughout the twentieth century. Henry Allison makes the point exactly:

With few exceptions, philosophers within the analytic tradition working on Kant or Kantian themes tend to excise from their working picture of Kant virtually everything that cannot be readily naturalized, that is, fit into a broadly empirical framework. This perhaps leaves room for a certain notion of autonomy (albeit certainly not Kant's notion), but not for idealism or, more generally, anything to do with the noumenal.¹⁴¹

Allison, in agreement with other high profile Kant scholars such as Karl Ameriks,¹⁴² argues that a moderate view of Kant's metaphysics can be pursued with respect to those elements of his philosophy that pertain to the issue of autonomy. Thus, transcendental idealism can be interpreted through Allison's "dual aspect" approach, which addresses it

¹⁴¹ Henry E. Allison, *Idealism and Freedom: Essays on Kant's Theoretical and Practical Philosophy*. (Cambridge: Cambridge University Press, 1996), xiii.

¹⁴² Karl Ameriks, *Kant and the Fate of Autonomy: Problems in the Appropriation of the Critical Philosophy*. (Cambridge: Cambridge University Press, 2000), 11 - 23.

as an epistemological rather than an ontological theory.¹⁴³ The capacity to access the noumenal domain can be understood as a facet of the “dual standpoint” – i.e., a stance that agents can assume with respect to both the noumenal and phenomenal realms – which of itself requires no metaphysical commitments. Even Kant himself backed away from the ambitious metaphysical depiction of freedom he set forth in the third section of the *Groundwork of the Metaphysics of Morals* in order to assume a more modest approach in the *Critique of Practical Reason*, one based on “the fact of reason,” the claim that we must understand ourselves to be free by merely positing our own freedom. This understanding in turn becomes the basis for our conscious awareness of the moral law.

However, neither Kant nor his successors could successfully modify the metaphysics needed to create a theory of self. The fully individuated self is at the centre of Kant’s philosophy, and especially his moral philosophy. However, the division of reason between its theoretical and practical applications is highly problematic where the individual self is concerned. Rationality exercised theoretically is subject to conditions and metaphysical limitations that apply to the human species as a whole. Thus, all humans are restricted to the knowledge of the world of experience; we cannot know the “thing-in-itself” or claim access to a world of metaphysical knowledge, certainly not through Cartesian claims that the self is a spiritual substance. In Kant’s world we gain far more rational power through our capacity to exercise pure practical reason, which can be utilized only by the individuated self. Kant thus has a problem because our experience of others is as empirical selves who have an empirical identity in the material world and do exhibit behavior that is responsive to desires and inclinations. Kant does set forth the

¹⁴³ Henry E. Allison, *Kant’s Theory of Freedom* (Cambridge: Cambridge University Press, 1990), 3 – 5, 234 – 236m. See also, Henry E. Allison, *Kant’s Transcendental Idealism: An Interpretation and Defense* Revised and Enlarged Edition (New Haven: Yale University Press, 2004), 20 – 49.

structural conditions for a “transcendental self” capable of functioning noumenally in the intelligible world, but without explanation as to how such a metaphysical construct can become sufficiently individuated in order for the private agent to exercise the moral sovereignty with which he is vested in order to exercise his mandate for moral rationality under pure practical reason.¹⁴⁴

Kant attempted to overcome these problems in the *Groundwork* by trying to demonstrate that the freedom needed for moral autonomy is not merely possible but actual, by trying to establish the faculty of reason in the nature of the self as a thing-in-itself. However, his argument in the *Groundwork* comes perilously close to violating Kant’s own prohibition against making substantive claims about the nature of the thing-in-itself. He argues that the faculty of reason must be derived from the claim that our noumenal self must be constituted as a thing-in-itself, and therefore part of the intelligible world. As noted earlier Kant would back away from this strong metaphysical claim in the *Critique of Practical Reason* and retreat to his claims on behalf of “the fact of reason.” His strategy was to maximize his epistemic claims on behalf of the self and its stature in the noumenal world while resisting any ontological conclusions that could be drawn from this position.¹⁴⁵

¹⁴⁴ The difficulty can be traced back to the third antinomy in the *Critique of Pure Reason*, which entails the reconciliation of freedom and causality, except that in this case it must be reconciled within a single human subject. However, whereas one can conceive of oneself as a mechanical causal agent under theoretical reason, it is difficult to conceive of one’s own power of causality as a free agent without invoking some concept of a noumenal self in a positive sense, which Kant believes to be impossible. (Kant acknowledges the problem to some degree in the Preface to the *Critique of Practical Reason*.) As Karl Ameriks points out, the problem applies to all conceivable rational beings, not merely humans. Karl Ameriks, *Kant and the Fate of Autonomy* (Cambridge: Cambridge University Press, 2000), 13 – 15. (Kant presupposed the freedom of all rational beings in the *Groundwork* (80) as a property of the will.)

¹⁴⁵ Kant’s attempt to articulate a positive conception of freedom “as a property of the will to be a law to itself” is located in the opening part of the third section of the *Groundwork* ([78]/65). His subsequent weakening of this strong claim through the postulation of “the fact of reason” is found in the *Critique of Practical Reason* (Pluhar, trans. [31]/46.)

Kant's immediate philosophical successors – Fichte, Schelling, Hegel – would all reject the difficult position Kant had taken on the self. Deeply unsatisfied with the rift between theoretical and practical reasoning that leaves the deepest, most insightful sources of human creativity that center on the thing-in-itself “off limits” to human cognition, the German Idealists shifted their focus to Kant's *Critique of Judgment* where he does in fact attempt to reconcile these two dimensions of reason through the aesthetics of the natural world, thereby engaging the precepts of German Romanticism in which the Idealists were deeply immersed. Nineteenth century Idealism would focus on unifying theoretical and practical reason by uniting the metaphysical and empirical versions of reality into a powerful whole. This came at the cost of the individuated self, which the Idealists sacrificed in favour of a unified vision of consciousness termed “the Absolute.” By contrast, the positivists, materialists and naturalists who rose in opposition to the German school could do no better with the possibility of an individuated self. The effort of addressing the issue of personal identity left Hume flummoxed: “I find myself involved in such a labyrinth that, I must confess, I neither know how to correct my former opinions, nor how to render them consistent.”¹⁴⁶

It is exactly Kant's efforts to fully individuate the self that lead him into his metaphysical dilemmas of Section III of the *Groundwork*. Having built up his earlier arguments that morality originates in standard moral cognition and that the ideal of the good will is the sole source of unconditional goodness, Kant goes on to claim that the supreme principle of morality, the categorical imperative, is an a priori principle, but also

¹⁴⁶ David Hume, *Treatise of Human Nature*, Appendix, Antony Flew, ed. (London: Collier-Macmillan Ltd., 1962), 282. A comprehensive study of the response to Kant's philosophy of self by German Idealists is found in Karl Ameriks, *op cit*. Ameriks argues that “there were important confusions, rather than mere ‘improvements’ or ‘completions’ in the works of Kant's immediate successors.” (9)

one that must be derived from the concept of rational agency.¹⁴⁷ Having constructed this argument analytically, he reaches in Section III for a synthetic argument that human beings really are rational agents, and with it the problems of ambitious metaphysical claims that would indicate that Kant is seeking forbidden knowledge of the thing-in-itself. However, it is interesting that Kant does so on the basis of the third formulation of the categorical imperative, which itself has two distinct articulations, the one based on the autonomy of individuated agents, the other on communal ideals of the Kingdom of Ends.

The autonomy formula, which expresses “the idea of the will of every rational being as a will giving universal law,” (G 4:431) clearly asserts the ideal of individuation of the self as the source of moral sovereignty. The “Kingdom of Ends” formulation, on the other hand, states: “Act according to the maxims of a universally legislative member of a merely potential realm of ends.” (G 4:439) Here Kant’s idealization aligns with that of Rousseau’s “general will,” an understanding that certain issues or principles have such resonance for a given community that they should be able to command a universal assent. For Kant, it is the categorical imperative that has the capacity to command this assent, for it takes people outside of the private concerns that create their uniqueness as empirical selves and into the noumenal, a priori domain of the intelligible world where universal moral imperatives are clear to all. But again, the difficulty for Kant resides in the problem that this transcendental self makes no provision for the individuation of the moral agent, an individuation that is only apparent for the empirical self that functions in the experiential world.¹⁴⁸

¹⁴⁷ *Groundwork of the Metaphysics of Morals*, T.K. Abbot, trans., sixth edition (London: Longmans, 1909).

¹⁴⁸ Kant’s analysis of self-consciousness in the *Critique of Pure Reason* extends from B139 – B157.

The solution that Kant increasingly reaches for in the post-Critical writings of the 1790's (especially *Religion Within the Boundaries of Reason Alone*) is one that brings the individual and the community into a reciprocal relationship of the kind that binds together freedom and morality or state and property.¹⁴⁹ The community cannot survive without its individual citizens, who are the source of moral sovereignty and thus the source of all of its laws. By extension, the individual is even the source of Kant's project of civilization, which reaches well beyond the citizen's lifetime. The individual agent cannot achieve fulfillment on her own, but is categorically compelled to enter a civil union, where "the maxims of a universally legislative member" of a possible Kingdom of Ends becomes feasible with the collective exercise of the categorical imperative that in turn creates the equivalent of the "general will" that Kant seeks.(4:439) The community reinforces social norms as well as principles of religious belief that make possible the agent's own individual projects for private perfection, projects that find their ultimate hope in the possibility that complete virtue can be achieved and rewarded with happiness in the afterlife.¹⁵⁰

¹⁴⁹ A clear distinction has to be maintained between Kant's concept of an ethical/religious community and that of the political community. (The former is set forth in *Religion Within the Bounds of Reason Alone*, the latter in the *Metaphysics of Morals*.) Membership in the political state is compulsory and can in fact, according to Kant, be enforced by law. By contrast membership in the ethical-religious community is, at least in principle, voluntary. Although this division seems contradictory, it helps to make sense of Kant's understanding of the state of nature, which in theory would be deserted if we were categorically compelled to join the civil state. In the section on "Private Right" in the *Metaphysics of Morals*, Kant does not clearly distinguish duties of ethics from duties of right (*recht*) that would apply prior to joining the state, which is especially problematic since Kant describes the state of nature as devoid of justice. Voluntary cooperation would be desirable on a moral basis (common promotion of individual virtue), with the subsequent establishment of state institutions leading to the realization that citizenship must be compulsory.

¹⁵⁰ Kant imagined a civil society that differed from the state, which was to strictly enforce laws and protect external freedoms under the Doctrine of Right. Both civil society and state are essentially contiguous, comprised of the same group of citizens who are categorically compelled to leave the state of nature and enter the state. But Kant thought of civil society in terms of the free association of men who scrupulously exercise their public responsibilities of free speech and association. ("On the Proverb: that May be True in Theory But is of No Practical Use," 1793, [295], Humphrey, trans., 76.) On this basis, citizens should, on Kant's view, reach a broad basis of political agreement not unlike that postulated by Rousseau with respect to the "general will." But, as noted, Kant also had a dual understanding of the idea of a community that

Kant's efforts to achieve a metaphysical foundation for autonomy as the basis for a unified account of both the noumenal and phenomenal dimensions of self thus end in ambiguities that are not resolvable in the manner of other metaphysical issues in Kantian philosophy, where a circumscribed epistemic account can be used to avoid ontological conclusions. As noted earlier, this is the case for transcendental idealism, the fact of reason, and the reciprocity of freedom and morality, among other issues. Kant does need a stronger, ontological account of the self that makes provisions for both its empirical and transcendental dimensions. Kant's central concern from a moral perspective is the need to fully individuate the self in order to grant it the full capacity to exercise pure practical reason. However, the transcendental self through which noumenal access and exercises of the categorical imperative must be effected does not readily submit to individuation.

Granted that these weaknesses in Kant's ethical philosophy are significant, he is nonetheless able to set forth a fully consistent account of autonomy and freedom when these concepts are put into practice.¹⁵¹ This next stage of Kant's position must now be examined in more detail.

included not only civil society but a religious community as well. Although the realization of the "greatest good" (i.e., the alignment of virtue and happiness after death) was a private project of faith, it also had to be manifested through a social medium in which the individual agent exercised his or her "moral vocation." On the one hand, the state was responsible for implementing the Doctrine of Right based on the authority of the civil society, but the Doctrine of Virtue was realized through the collective efforts of the religious community. ("Religion Within the Limits of Reason Alone," (1793-1794) 6:94 in *Basic Writings of Kant*, Allen Wood, ed., (New York: The Modern Library, 2001), 405.)

¹⁵¹ Critics of Kant's theory of freedom and autonomy have generally (following Hegel) disputed the possibility that agents can set aside their own interests in order to comply with the moral law, or if they do accept the possibility contend that there would be insufficient motivation to comply with it. A third line of attack (also championed by Hegel) challenges the possibility of deriving any content from the categorical imperative. It has been claimed on the basis of conclusions drawn in chapter two that issues such as global warming and resource depletion are serious enough to create motivations through duty on the basis of the precautionary principle. The conceptual possibility of the categorical imperative was challenged by Philippa Foot in a famous essay, "Morality as a System of Hypothetical Imperatives" (157-173) in *Virtues and Vices and Other Essays in Moral Philosophy* (Oxford: Basil Blackwell, 1978). Foot disputes the claim that some sort of irrationality is invoked by ignoring the normative force of morality, citing the claim that those who violate moral laws can be regarded as rational and consistent. But this ignores the position that has been put forward in this dissertation that there is a rational distinction between the short term

The Application of Autonomy to the Principles of Kantian Moral Philosophy

Kant's vision of the individuated self functioning as an agent vested with moral sovereignty did not survive well in the nineteenth century, and the fate of this vision provides a strong account of the incapacitation of the private citizen and civil society in general debated by Lippmann and Dewey. The nineteenth century was dominated by two major sociological trends: industrialization and nationalism, both of which were potentially antagonistic to Kant's hopes for multigenerational projects for the perfection of laws and an inexorable, preeminent role for the self. Industrialization demanded vast social reorganization out of localized cultures and into large units of standard, unified language and economic practice. An overriding concern was thus centered on the loss of cultural identity and the bonds of community membership. The tightly knit relationship of rural towns and country villages that Adam Smith took to be the foundation of all economic organization was thrown into upheaval by the mass migrations of workers out of farming communities and into impersonal cities dominated by industrial factories.

This sense of loss of the community as the source of moral and social values had gained considerable intellectual and political traction, finding its way into conservative theories of Burke, Bonald and deMaistre, into the social literature of Thackeray and Dickens, into the policies of the Tory party in England and into the Oxford Movement in

interests of agents and the long term interests of society at large that is reflected in the distinction between feasibility costs and social costs. Moreover, Foot does not consider the impact of all three formulations of the categorical imperative. The requirement to treat humanity as an end-in-itself requires the recognition of the natural teleology for the realization of man's rational nature. What is recognized as rational must be rational for all men under a time horizon that extends well into the future.

religion.¹⁵² This intellectual stance provoked a communitarian response far more in line with the ethics of Hegel than those of Kant. By the end of the nineteenth century, the notion of an internally divided self was being promoted by thinkers as diverse as Freud and Nietzsche.¹⁵³ Sociologists such as Durkheim began to regard morality scientifically as the creation of rural communities and as being largely superseded by a new vision of the individuated self as a preference-oriented maximizer whose concerns were largely centered on self-advancement within the new industrial forms of organization. This scientific stance was supported by concurrent applications of evolutionary theory to social contexts (e.g., as in the work of Herbert Spencer) and thus took empirical historical events to be the source of morality (in contrast to Kant's efforts to use a priori principles to glean the meaning of historical developments). Karl Marx, extending this historical dialectic, introduced the concept of alienation to depict the etiolation of self cut off from its traditional connections to and control of the means of its own productive efforts.

Strictly from an empirical standpoint, this weakening or etiolation of the self construed as individual agent is fully comprehensible, given the nature of technological civilization itself, its imperatives of consumption, its dominance of the structures and systems in which we must live, think and act. The possibility of genuine, economic autonomy and empirical fulfillment outside of these complex systems is not generally considered to be credible, apart from minority religious communities, Hutterites and Amish. But Kant's empowerment of the individual as ultimate moral authority is based

¹⁵² An account of Hegel's role and influence within the context of nineteenth century conservatism, social contract theory and other major intellectual movements is found in Domenico Losurdo, *Hegel and the Freedom of Moderns*, Marella and Jon Morris, trans. (Durham, N.C.: Duke University Press, 2004).

¹⁵³ An account of the progress of the history of self throughout the nineteenth century and its roots in the thinking of Kant and Rousseau is found in Robert C. Solomon, *Continental Philosophy Since 1750: The Rise and Fall of the Self* (Oxford: Oxford University Press, 1988). Solomon argues that the disintegration of the philosophical concept of self is connected to the increased historicism and anti-metaphysical trends in postmodernism, which also eschew foundationalism and transcendental approaches to philosophy.

crucially on the assumption of breaking this empirical grip, of providing both morality and the self with an a priori, metaphysical foundation. This foundation applies not only to the self but to the political institutions that we are compelled to develop when, as a collectivity of individuals living together, we face the imperative to leave the state of nature and come together as an organized civil community.¹⁵⁴ The full scope of this a priori, metaphysical foundation will be developed later, but for now, as an introduction, it is important to set forth the conditions under which the moral authority of the self and the political authority of the state are brought together in a reciprocal relationship. For Hume and for Adam Smith, the political and social elements of the cohesion model are a given result of historical development; they represent an actual state of affairs that can quickly be accepted and used in developing an understanding of how free markets operate. We can naturally expect to find benevolent, companionable agents with whom cooperative business and trading relationships are possible. To the extent that some entrepreneurs are greedy or avaricious, the mechanics of laissez-faire markets ensure, as noted earlier, that private vices are transformed into public virtues.

Kant will accept none of this at face value. In his view, morality can never be dependent upon empirical contingencies of historical events or benevolent dispositions or the actions of market agents seeking to advance their self interest. In seeking to limit the metaphysical grounds on which human reason advances its speculations about scientific knowledge, Kant discovered that a powerful a priori dimension opened into a noumenal, “intelligible” domain where pure practical reason has its base of operations. Human actions and practical reason were not subordinated to the knowledge needed to cope with

¹⁵⁴ Kant’s position on the relationship of the individual agent with the state and political community is covered by Paul Guyer, *Kant on Freedom, Law, and Happiness* (Cambridge: Cambridge University Press, 2000). Cf. also Wolfgang Kersting, “Politics, Freedom and Order: Kant’s Political Philosophy,” *op cit*.

causally-driven events in the empirical world. Freedom was not merely the external freedom guaranteed by governments but an internal, transcendental freedom outside of empirical, causal forces. If freedom existed outside of this causality, that meant that practical reason was not entirely dependent upon empirical knowledge; there must also be a domain of reason that was intrinsically practical, i.e., a pure practical reason that must exist to identify or formulate unconditional practical laws.¹⁵⁵ Such laws, arrived at by means of the categorical imperative, functioned universally and necessarily and determined which privately generated maxims or principles (hypothetical imperatives) were fully moral. An agent capable of applying such categorical imperatives could do so only through a transcendental, non-empirical dimension of self. Exercising them would require the metaphysics of synthetic a priori judgments, that is, judgments that would identify, apply and bind such universal principles to the self through a deliberate determination of the will. It is through this transcendental, a priori process that the individual becomes morally empowered and capable of functioning as an autonomous agent. The abject self is no longer weakened and subordinated to the empirical and technological conditions of his life that would quite reasonably seem (from an empirical standpoint) to exercise a profound influence on his very sense of self-identity.

In order for Kant's moral vision to regain its relevance and overcome all of the historical disadvantages it acquired during the nineteenth century, the individual agent must become fully capable of acting functionally as a source of moral authority in a modern society and stand in a reciprocal relationship to the state in which he lives.

Under the provisions of Kant's philosophy, three conditions would have to apply:

¹⁵⁵ The recognition of the double sense of freedom in both its internal and external aspects depends on Kant's notion of the "dual standpoint," the claim that we must conceive of ourselves as both moral agents belonging to the noumenal realm, and also as empirical entities subject to laws of cause and effect.

First, theoretical reason must be separate from and subordinate to practical reason

As Kant himself notes, "... when pure speculative and pure practical reason are combined in one cognition, the latter has primacy, provided, namely, that this combination is not contingent and arbitrary but founded a priori on reason itself and therefore necessary. For without this subordination there would arise a conflict within reason itself..."¹⁵⁶ The potential "conflict" was elaborated in the *Critique of Pure Reason* as occurring when the ideas of pure reason (e.g., the soul as a permanent and substantial subject) or the postulates (God, freedom, immortality of the soul) are set before theoretical reason and subjected to the functions of understanding and judgment by means of synthetic a priori propositions. Speculative (i.e., theoretical) reason is forced, through the pure categories of the understanding, to acknowledge (via logic) the reality of these concepts and thus to address them as substantively meaningful. But the content of such meaning is provided by pure practical reason, particularly any moral significance. Such topics can be rendered as truth conditional propositions from which (logically) metaphysical claims can be made about what must be the case or how a state of affairs must be constituted, but such propositions still cannot be subject to truth claims that can be adjudicated by theoretical reason.¹⁵⁷ Nonetheless, we may find ourselves compelled through practical reason to believe the propositions set forth on the basis of

¹⁵⁶ *Critique of Practical Reason*, trans. Thomas Kingsmill Abbott, 6th ed. (London: Longmans, 1909), 218 [263].

¹⁵⁷ Kant would continue to articulate his views on the role of the ideas of reason as necessary postulates, needed to activate the faculty of judgment in unifying the relationship between the noumenal and phenomenal realms. In his final work, *Opus Postumum*, Kant elaborates the Idea of God as expressing the totality of supersensible reality, while the Idea of the World reflects the totality of empirical reality. Kant then claims that synthetic a priori bind the two together through regulative principles as unifying concepts.

these postulates when theoretical reason must remain mute. As Christine Korsgaard states:

... [W]e have an interest springing from the needs of morality in believing it [a proposition taken from a postulate of practical reason]. Since practical reason supports belief in the postulates, its power is more extensive than that of theoretical reason. In establishing the postulates, practical reason takes up the metaphysical tasks that theoretical reason had to abandon. For if there is a God, who made the world in order to achieve the Highest Good, then the world does have an unconditionally good purpose.¹⁵⁸

The division between theoretical and practical reason dates back to Aristotle, but in all cases the theoretical superseded the practical, since empirical practical reason is fully dependent on theoretical reason: what one does depends on what one knows. In Aristotle's case, the judgments, actions, desires, and rational intentions of good men are always in coherence. With Kant, moral action results from choices made according to duty, where desires and self-interested inclinations resulting from the "radical evil" inherent in human nature must constantly be overcome. Kant was the first to grant practical reason a supremacy built on its a priori authority over theoretical reason.¹⁵⁹

This separation and subordination were part of the vast set of arguments that established the principles of transcendental idealism in the *Critique of Pure Reason*. Aristotle had established the primacy of science, theoretical reason and the empirical world by arguing for a close interfusion of essences and appearances that yielded a workable system of teleology (final causes) in nature which in turn brought theoretical and practical reason into a close cohesion. With Cartesian dreaming arguments, the

¹⁵⁸ Christine Korsgaard, *Creating the Kingdom of Ends* (Cambridge MA: Cambridge University Press, 1996), 30.

¹⁵⁹ There are numerous respects in which Kant's ethical theory can be understood as a response to Aristotle: the division between theoretical and practical reason, the use of categories, the classification of virtues and even the independence of religion and morality, with the latter in many respects providing the basis for the former. A rational approach to a God understood primarily through the intellect characterizes both Kant and Aristotle, and was the basis for the latter's powerful influence on Thomas Aquinas.

reliability of appearances was thrown into doubt and epistemological approaches subsequently divided between rationalist (metaphysically oriented) and empiricist (appearance oriented). Kant sought to bridge the divide through transcendental idealism. We gain strong scientific certainty in the Newtonian laws that govern appearances, but the nature of objects and processes as they are in themselves exceeds our understanding, a part of the “noumenal” world beyond the phenomenal world of appearances. Our knowledge of the world of appearances is thus structured by our own internal frameworks, through the pure categories of the understanding. Four principal categories, quantity, quality, relation and modality were each supported by four subcategories, and through these twelve categories and the judgments they generated, a knowledge of the empirical world could be built up on the basis of sense impressions.

The separation of theoretical and practical reason and the need to privilege the latter over the former could be seen in what Kant described as the efforts of theoretical reason to generate metaphysical speculations through the use of the categories themselves. In going beyond its justifiable domain, theoretical reason would create contradictions, or antinomies, in each of the four main classes of categories. The most significant of these antinomies is the third (in the category of relation), since it is here that pure practical reason gains its exclusive authority over theoretical reason to correlate concepts of freedom and causality, and from there to gain authority over moral reasoning. On the one hand theoretical reason must argue that everything and every process in the world is causally determined and therefore no freedom is possible. On the other hand, a causality beyond the laws of nature, a causality through freedom, is necessary to establish a grounding for the possibility of appearances. Transcendental idealism provides the

possibility for transcendental freedom by showing the logical necessity for a noumenal, “intelligible” world in which action can escape the straightjacket of causality that binds all elements of relation for theoretical reason. A transcendental freedom can thus exist beyond the range of causality and the possibility of morality is consequently opened for human action.

The importance of privileging practical reasoning in this way can be seen most especially in the issues of theoretical and practical science that were raised in chapter two. There it was noted that at the beginning of the scientific revolution in the eighteenth century theoretical science had full freedom to explore the natural world and to bring forth the benefits of reason and the scientific method that would later become the basis for the Enlightenment. However, the industrial revolution and the subsequent expansions of technological capability as man gained the power to “act into nature” have dramatically transformed this balance of power so that today it is the alliances of business enterprises and practical science which, subject to economic imperatives for growth, pressure the theoretical sciences towards the achievement of predetermined objectives. Thus, even in modern empirical contexts what we know is no longer the driver and motivator of what we do; it is what we are under pressure to accomplish that increasingly determines the level of scientific knowledge we must possess. Writing at the end of World War II, Bertrand Russell observed that theoretical science, not practical science, would ultimately determine the potential of the human race to flourish in the post war world and avoid the potential devastation that nuclear war would bring.¹⁶⁰ If theoretical reason can no longer determine practical reasoning within the rational parameters of the

¹⁶⁰ Bertrand Russell, *A History of Western Philosophy*, *op cit.*, 828 – 836.

material world, then Kant's case for privileging pure practical reason becomes all the more compelling.

Second, the priority of right over good

With the separation of theoretical from practical reason and the greater authority given to the latter over the former through transcendental idealism went the possibility of privileging right over good. In all approaches (metaphysical or phenomenalist, rationalist or empiricist) in which practical reason follows theoretical reason (where action follows knowledge), there is almost always a subsequent privileging of the "good" defined in terms of good states of affairs, happiness or ideal experiential states. With Kant's efforts to give practical reason greater authority over theoretical reason went a concomitant emphasis on the formulation of rules, principles or maxims as guides to action. Morality is now achieved through the identification and execution of one's duty, which is to be valued for its own sake.

Here, the first direct connection with the failure of Enlightenment assumptions becomes apparent. Kantian theory can first be applied to the problems that occur when the economic goal of maximizing the satisfaction of rational preferences produces conflicts in the rationality of prudential objectives, as discussed in chapter two. In creating a domain of moral rationality over and above that of prudential rationality, Kant has provided an a priori space (in fact what must be an a priori space) in which the possibility exists for a rule-creating agent to control or to limit the damage which the failures of the assumptions can cause. This a priori space would, for example, make room for the consideration of social costs that dangerously exceed feasibility costs, or the

possibility that potentially negative outcomes that have been pushed into the future may soon crowd into the present. This is a space that would therefore privilege precautionary principles or consider potential ingenuity gaps and allow corporations and other private agents to exercise responsible citizenship practices. It is for this reason then that a strict, formalist theory such as Kant's is most conducive to this dissertation project and can provide the basis for a clear understanding of the moral implications of the failure of the Enlightenment assumptions and the morally unacceptable outcomes that can be generated in consequence. As noted in chapter two, a state of affairs may be "good" in terms of utility consequences that are considered at any given time. However, even an ideal state of affairs may, over time, violate sustainability requirements or generate externalities or other negative consequences that may be difficult to control. Under Kantian restrictions, on the other hand, we are compelled to imagine - and to bring into existence – ideal states of affairs that ought to be the case because they must be the case.¹⁶¹

When considering the specifics of privileging the right over the good an insightful contrast can be made between the earlier example of Hegel's "absolute spirit" and what Kant describes as a perfectly good will or "holy will." In one of its dimensions the absolute spirit represents as a metaphysical ideal the Enlightenment objective of progress through history through the acquisition and application of more complex forms of knowledge (and especially technological knowledge). This spirit represents the triumph of theoretical reason and the justification of state ideology, regardless of the moral

¹⁶¹ This is an imperative that does not crystallize fully until the *Critique of Judgment*, where, as noted earlier, Kant sets a high premium on aligning the teleological purposes of the natural world with the final ends of the human race, which are bound up with the full realization of its rational potential. The need to realize human freedom through the moral law would require an explicit moral analysis of the natural world through its physical laws and process. All scientific endeavors that entailed "acting into nature" would have to require the formulation of states of affairs that ought to be the case because they must be the case in order to be in full compliance with Kant's dictates for the realization of the final ends of humanity that are fully reflective of natural teleology. This subject is explored in more depth in chapter four.

horrors that also become manifest through history. Kant's holy will, on the other hand, represents the absolute ideal of practical reason. Kant imagines a divinity whose will is a perfected exercise in self-imposed duty, a will formulated entirely a priori within the noumenal realm, the exercise of which must conclude in a legislative consequence. In contrast to Aristotle's description of an ideal fusion of theoretical and practical reason in the virtuous man, Kant believes that no man could possibly be capable of such an achievement.¹⁶² Only a holy will, which combines all the perfections of omnipotence, omniscience and absolute benevolence, can self-formulate itself so completely that there can never be any internal struggle between self-interest and moral duty, between good and evil. The concept of virtue thus cannot even be applied to such a being, since virtue by definition refers to the moral worth generated through internal struggle and the deliberate choice to value good over evil.

As noted earlier, it is no accident that Hegel's idealist oriented philosophy came to dominate nineteenth century thought throughout Europe and Britain. Its account of history as a manifest unfolding of Absolute Spirit found ready acceptance in an age in which the industrial revolution and the material prosperity it brought made the acceleration and rapid transformation of history a palpable phenomenon. This was the age of the triumph of theoretical reason, when unlimited belief in prosperity and progress through ongoing scientific development and material gain had become a virtual religion, when moral theory became defined in terms of the consequences of such progress. In England, Hegel's success found a correlative in the positivism and utilitarianism of Herbert Spencer, who believed in the evolutionary development of human societies

¹⁶² In contrast to Hegel, no ideology is possible in Kantian ethics or in Kant's political philosophy. Given that moral sovereignty is vested in the private agent, every element of every public policy, constitutional provision or codicil must be subjected to relentless and continual rational scrutiny by every citizen.

towards a material perfection in which evil could be eradicated. His view that technologically proficient societies would supersede and dominate the others conflated with Hegel's principal tenet that man's historical development was right because it was inextricably bound with the natural order of the universe. There is nothing that compels man to think outside of this process, to ponder whether unrestricted technological development is fraught with any long term moral hazards. There is, in short, no anticipation of anything like potential externalities or failures in sustainable development. All progress and all material success is defined entirely in terms of immediate short term gains in prosperity that manifest the "goodness" of states of affairs. There is nothing that compels the search for a long term perspective from which the grounds to circumscribe unlimited technological development might be found.¹⁶³

This is the deeper meaning of Kant's rejection of the Enlightenment ideal of unlimited material and scientific progress for its own sake. For Kant, history is not the domain for unlimited technological development, for the ensured empowerment and manifestation of theoretical reason. Future progress in material gain and the subsequent eradication of evil was not a certainty or even a probability (subject to empirical measurements) but a hope. For Kant, the domain of hope, which covers both the belief in

¹⁶³ This notion of man's subordination to the inevitability of his own technological progress survived in continental philosophy long after Hegel. Heidegger's philosophy, for example, is built on the concept of "dasein" or the subordination of individual human agents to the ultimate manifestation of "being" throughout history. In this view, man finds himself already "enframed" by his own technology, in which artifacts themselves are deemed to be seeking their own fulfillment through greater efficiency. Man then simply finds himself with a greater increased store of artifacts available for use, a "standing reserve." Cf. Martin Heidegger, "The Question Concerning Technology," (3 - 35) in *The Question Concerning Technology and Other Essays* (New York: Harper & Row, 1977). By contrast, Hegel has no general theory of the good, which is always assured by the progress of human history (given Hegel's credo that the rational is real and the real rational). As Allen Wood points out, Hegel's dialectics ensure that technology today will not guarantee the good of future generations, who by definition will be more advanced in their self understanding and technological capabilities than the people of today. And yet the consequences of their actions today may well result in negative consequences for people of the future. Allen Wood, *Hegel's Ethical Thought* (Cambridge: Cambridge University Press, 1990), 33 – 34.

the moral perfectibility of the individual agent through religion and the belief in the progress of law and republican governments towards an ideal of world peace, requires theoretical reason and practical reason to come together in a unity that privileges practical reason. As noted earlier, theoretical reason runs into trouble when, in Kant's view, it begins to generate truth conditional propositions that take it beyond its empirical limitations and into a logical space where practical reason must exercise its authority over theoretical reason exactly for the reason that moral issues are brought into play.¹⁶⁴

At this point Kant's moral theory acquires a vital importance for the problems associated with the failures of Enlightenment assumptions as elaborated in chapter two. As had been concluded, there is nothing within the empirical domain itself, nothing that would reasonably be expected to be rationally required from within business or technological objectives or the kinds of internal controls they generate, that would alert human beings to the long term dangers of a specific industrial practice at the time of development. In short, once feasibility costs have been met, there is nothing that compels investigation into further social costs. Such costs are emergent and may not become manifest until years later. The benefits of using coal power or developing steel production in the nineteenth century were so obvious and immediate (and could have served so well as textbook examples of inevitable human progress) that the long term

¹⁶⁴ Kant specifically believes that we have a categorical obligation to aim for the perfection of a holy will even though we know that such an ideal is utterly impossible in this life. For this reason we are compelled to a rigid belief in the postulates of God and the immortality of the soul and in the belief that the ultimate project of human life takes us beyond the grave into a mode of existence where we continue to perfect ourselves throughout eternity. Thus Kant's strong beliefs in the crucial importance of ongoing scientific investigation is matched by an anti-humanist, almost medieval mindset that shifts the focus for the fulfillment of human life away from this world and towards life after death. Each human being makes his tiny contribution towards the ultimate ideal of world peace not by living in history but beyond it. His self identity thus cannot be limited or constrained by social constructions since his moral perfection is an entirely private matter of his soul, an enterprise in which he is entirely accountable to God over the course of eternity. (Kant's views thus differ from standard Christianity, in which heaven represents the stasis, the completed state of the development of human virtues. For Kant, the self-improvement project never ends.)

dangers from industrial pollution could not have been taken seriously at the time. It took a full century for environmental science to build empirical evidence and come into its own as an independent discipline – and by now the nature of environmental damage, of resource depletion and global warming have become very serious issues. It would have required a Kantian type pre-commitment to investigate every possible impact of every new industrial innovation or technological process before its implementation as a matter of principle. But this would have been an unthinkable violation of the principles of efficiency in bringing new products to market. It is an inviolable business imperative that demands ruthless efficiency in reducing research and development costs to the absolute minimum, to only those processes necessary and sufficient for the feasibility of bringing new products into production. Thus, a business imperative which is in fact a hypothetical imperative must trump a categorical imperative. Theoretical reason must trump practical reason.¹⁶⁵ This is the core of the problems and issues raised by the failures of the Enlightenment ideal. This is even more apparent when we contemplate the cutting edge

¹⁶⁵ This also raises a famous issue in metaethics: G.E. Moore's open question argument, which denies that rightness is analytically equivalent with some formulation of the good (e.g. utility maximization). The imperative force of theoretical reasoning may mandate certain actions in certain cases, but we would have no certitude of rightness if unknown or uncertain risks are unleashed in the long run. A related but very different variant of this issue is expressed by Marxists who would question the very possibility of using morality to think outside of these imperatives of theoretical reason. Marx rejected all forms of morality, religion and law as forms of ideology. As Allen Wood notes, the claim that all societies are based on class oppression means that social stability is only possible if all citizens lack crucial knowledge of the full implications of their actions. "The problem is that the full significance of our actions may extend beyond what we care about, even beyond what we are capable of caring about, because it extends beyond what we understand about ourselves and our actions." For example, many Americans espouse extreme views of Christianity based on the Bible as the literal truth, even though the New Testament explicitly condemns individuals and social systems that do not attend to the needs of the poor. However, the economic imperatives of globalization entail that multiple millions of destitute people around the world (e.g. in the Congo and the Middle East) are left worse off by U.S. national security imperatives regarding oil, food or water resources. As Wood notes: "... it may not be feasible for modern moral reflection to go all the way with its critical thinking without undermining the moral character of that thinking." Allen Wood, "Marx Against Morality" (511 – 524) in *A Companion to Ethics* ed. Peter Singer (Oxford, Blackwell, 1993), 515, 523. What follows from this is an argument in favour of moral realism in Chapters 4,5, one that will be linked to Kant's ethical rationalism, one in which metaethical positions must be established first before the elements of the content of moral positions or policies can be fully determined..

technologies that are now being brought to reality. Nanotechnology, for example, could be seen as an absolute necessity from an economic perspective; its potential benefits measurable in the trillions of dollars. Yet we know in advance that this is a technology with huge potential for environmental disaster. We can already be reasonably certain that products of this technology will be brought to market without sufficient testing by government agencies necessary to provide effective controls against potential calamities. In short, all of our intellectual capacities are taken up with complexities that are centered on problems and issues of how to keep our existing technology functioning just to preserve what we already have, let alone to meet the imperatives of capitalist economics that demand ongoing prosperity and growth.¹⁶⁶ We are deeply caught up in problems of double effect that threaten the very means of subsistence for millions in the third world. This is simply a foreseeable yet unintended consequence of the imperatives of sustaining a highly advanced technological society in the West. Our Enlightenment commitment to creating, maintaining and expanding the range of desirable states of affairs through preference oriented economics has produced considerable difficulties for consumers afraid of losing their lifestyle and for officials and technicians charged with the responsibility for keeping the entire system afloat.¹⁶⁷

¹⁶⁶ Thomas Homer-Dixon argues that this disjunction between present and future creates its own self-destructive dynamic that is accompanied by pervasive and systemic patterns of self-deception that can permeate an entire society: "The longer people sustain a social, economic or ecological system in its growth phase, the sharper, harder, and more destructive its ultimate breakdown will be." Thomas Homer-Dixon, *The Upside of Down: Catastrophe, Creativity and the Renewal of Civilization* (Toronto: Alfred A. Knopf, 2006), 232. The elites and experts in such a society owe their wealth and social standing to the growth that has generated these destructive effects, and so the social ideology will be based on a strong proclivity to deny the impacts or even the very existence of these destructive effects. *Ibid.*, 216 – 219.

¹⁶⁷ This psychology of consumption is analyzed in Juliet Schor, *The Overspent American* (New York: Basic Books, 1998). The philosophical perspective of problems of technological maintenance is addressed by Martin Heidegger, "The Question Concerning Technology," *op cit.* and George Grant, *Technology and Justice* (Toronto: Anansi Press, 1986).

The deeper point that can be taken from Kant's moral philosophy is directly applicable to Adam Smith's ideal of social cohesion. For both Kant and Smith, the point of man's economic life was to procure the necessities needed from the empirical world that provided the means to the end of a self-fulfillment that was both deeply personal and to be achieved by active community involvement, political participation, and, for Kant, through moral self-legislation.¹⁶⁸ For the most intelligent leaders and citizens, this would have entailed keeping a watchful eye over man's economic development, being highly alert for points of technological advancement for which new laws, new categorical imperatives and new restraints would have to be put into effect. For example, the development of double entry bookkeeping constituted just an historical point. The Kantian legislator would recognize the need to use banking as a business framework in order to separate interests, to recognize that the metaphysical division between short term profitability and long term prudence entailed by double entry bookkeeping stipulated the adoption of strict banking laws. Although a detailed case study analysis would be needed to fully vindicate this claim, such laws could be shown to have nomological force and thus would require the synthetic a priori propositions necessitated by Kant's moral metaphysics. Any failures of moral thinking, any failures to generate the appropriate categorical imperatives would result in the conflicts of rationality under which short term banking profits would undermine long term financial prudence.

These then are the grounds by which Kantian moral theory comes into play with respect to the failure of the Enlightenment project. A modern industrial society can

¹⁶⁸ Kant's "self-sufficiency principle," an a priori principle of "independence" which, along with freedom and equality, would provide the necessary conditions of social existence based on the capacity of each agent to satisfy the basic needs of empirical existence. The satisfaction of such needs ensured his physical autonomy under the principle of external freedom. Kant, *Theory and Practice*, *op cit.*, 290.

achieve a moral ideal when the prudential rationality of business and technology can be constrained by a moral rationality operating from a higher perspective maintained collectively by citizens, one that keeps constant watch over economic development and identifies and implements the required constraints as needed. Practical reason comes to find the grounds for its authority over theoretical reason. It is not simply a matter of limiting knowledge to make room for faith but of privileging faith and moral reason to make room for permissible levels of technical knowledge and economic advancement.

Third, full individuation of the moral agent

As noted earlier, the individual moral agent plays a central role in Kant's moral philosophy. On the one hand, categorical imperatives are to be formulated in a manner that treats all men as ends-in-themselves, never as the means to an end;¹⁶⁹ but it is man as individual agent who functions as a moral self-legislator and thus, qua individuated agent, the sovereign source of moral authority. It is man as individual who seeks the ongoing perfection of soul in an existence beyond death. By focusing economic life on the procurement of necessary goods, each man gains his right to access markets and to trade, to gain the basics needed for self-fulfillment (what Rawls would describe as "primary goods"). The cohesion model set forth by Adam Smith thus makes provision for fundamental human equality, for the equal opportunity for each man to actualize his deepest potential for community activity and self-legislation. The model provides the means for these ideals to spread to the rest of the world through "brimming pools," Adam Smith's term for fully invested markets that are themselves concentrated on necessary

¹⁶⁹ The second formulation does not prohibit men from instrumentally employing other men for the purposes of private or organizational profit. Kant's specific stipulation is to treat *humanity* as an end-in-itself, whether this humanity is conceptualized in a particular individual, a group, or the human species.

goods and services. Kant agreed with this empirical vision but stipulated an a priori dimension.

By going beyond a merely empirical perspective, Kant rejected the contingency of wealth accumulation in Smith's vision, insisting that three principal a priori conditions for political organization be fulfilled: freedom, equality and self-sufficiency. Each man achieves a genuine political equality, as well as an equality of economic opportunity through the guaranteed means of market access to provide for his basic needs. Political independence is thus linked to economic independence.¹⁷⁰ In modern economies, self-sufficiency depends on ready access to employment opportunities and on the power of government to guarantee either work or social assistance through the redistribution of wealth. Layoffs or outsourcing create imperatives for governments to ensure that equivalent employment opportunities are available. In the empiricist worldview of John Locke and Adam Smith, such guarantees are not necessary¹⁷¹ because of the natural abundance of resources that the earth makes available to those with productive initiative. The contingencies of resource access in any particular geographic location do not weigh heavily with the empiricists. They do for Kant because access to material necessities is a condition of possibility for political organization, and thus the guarantee of their provision becomes an essential a priori principle along with freedom and equality.¹⁷²

¹⁷⁰ Immanuel Kant, *Theory and Practice*, *op cit.*, 290 – 296.

¹⁷¹ For Locke, no guarantees are required because the individual agent has complete freedom of political sovereignty, i.e., he can leave the commonwealth at any time and provide for himself by returning to the state of nature, relocating himself to another geographic area whose natural resources he is free to exploit. For Adam Smith, the free market is the best guarantor of minimal provision for the poor. Cf. Michael Ignatieff and Istvan Hont, *op cit.*

¹⁷² This is a point that on occasion is not fully grasped by Kant's commentators. Wolfgang Kersting, for example, states: "Insofar as self-sufficiency defines the citizen and the rational legal competence to be a co-legislator is granted to the citizen only as a possessor of property, a contingent economic factor becomes decisive in the assignment of a rational right. In contradiction to his declared goal of a critical foundation for right and politics free of all empirical features Kant elevates a contingent factor to the rank of an a priori

(Political economy thus becomes a crucial discipline. Keynes, for example, saw full employment was regarded as both a moral and an economic imperative.¹⁷³)

For this reason, Kant rejected various empirical schemes for establishing property rights under social contract theory. In Locke, property rights, based on initial acquisition, are guaranteed by the state; in Hobbes, property rights are subordinated to the will of the sovereign. It was Kant's achievement to recognize an a priori reciprocity between property and state that both recognized fully guaranteed property rights but at the same time subordinated such rights to higher moral or legal principles that could be generated from the reciprocity between the moral authority of individuals and the political authority of states. Kant's philosophy fully recognizes the entrepreneurial right to use property in order to maximize wealth by subordinating this right to higher public policy principles that may be needed to curtail dangerous externalities.

Metaphysically, the belief in a strong, separate, self-conscious subject was well established in Kant's time. Thus it was universally granted that political policies, social relationships, and contractual agreements originate in the thought processes of individual agents and not in any collective consciousness as the basis for Rousseau's "general will." It was only with Hegel that the intersubjective dependence of the individual on society

principle of justification. Kant is guilty here of a serious theoretical error, which by means of an offence against all of the methodological and systematic principles of Kantian philosophy transforms the rational state, which makes all humans into citizens, into a state of property owners, which degrades those without property into second-class political beings." [Wolfgang Kersting, "Politics, Freedom, and Order: Kant's Political Philosophy," (342 – 366) in *The Cambridge Companion to Kant*, Paul Guyer, ed. (Cambridge: Cambridge University Press, 1992), 357.] Kersting does qualify this position by correctly noting that Kant's self-sufficiency condition is made necessary by the fact that "everyone's right to freedom is affected by property claims," and so "rational right cannot justify placing those who have no possession of property under political tutelage." (358) However, Kersting still misses the central point that the a priori nature of the self-sufficiency condition lies in the guarantee of property, not in the actual, physical goods provided.

¹⁷³ Moshe Maor, *Political Parties and Party Systems: Comparative Approaches and the British System (Theory and Practice in British Politics)* (London: Routledge, 1997), 219.

for the construction of his self-identity came into increasing acceptance. Today this is the basis of perfectionist, pragmatist, communitarian and virtue theories of various sorts.

The metaphysical empowerment of the individuated self began with Descartes, whose cogito, the “I” as a “thinking thing,” was the foundation of all epistemological certainty. Descartes provided an overwhelming metaphysical vision of the self and the content of its experiences; its powers of free will were, in Descartes’ view, almost unlimited. However, his philosophical system was based on the priority of theoretical reason over practical reason, of epistemology over ethics, an inevitable result of the fact that his lynchpin for separating the spiritual from the material was substance dualism. Descartes was committed to progress through history by way of scientific advancement. Kant’s system, to a certain degree a response to this Cartesian position, was built on the appearance/reality dualism provided by transcendental idealism, and it was only on this basis that practical reason could find the grounds for exercising authority over theoretical reason. Setting strict limitations to the mandate of theoretical reason by separating empirical knowledge from the possibility of knowledge of the thing-in-itself opened the door for practical reason to be able to arrive at, for example, conclusions about the nature of the “end-in-itself,” about the imperative for treating human beings as ends and not means, about making determinations of intrinsic value. But Kant was also left with extreme difficulties in establishing a basis for the “I-in-itself,” and thus to arrive at the means for preserving a fully individuated self. Kant explicitly rejected Descartes’ substance dualism with respect to the self, regarding it in the *Critique of Pure Reason* as

one of the paralogisms of pure reason. [A348] For Kant, the logical unity of the self that must necessarily exist did not translate into a metaphysical unity as in Descartes.¹⁷⁴

In Descartes the path to a fully individuated self is simple, straightforward and is built through very strong and concise arguments. Kant, committed to a distinction between the noumenal and phenomenal realms that provides separate spheres of activity for both theoretical and practical reason, was forced into a tortuous argument to justify the need to separate an empirical self from a transcendental self. As noted, the empirical self establishes the content of conscious experiences and self-identity in the empirical world. The transcendental dimension of self, on the other hand, provides both the self-conscious understanding of the empirical world (and the empirical self) through the unity of sensible intuitions, as well as the capacity to function as a self-legislating moral being from a standpoint in the intelligible world. Kant, however, was ambiguous about the way in which these two dimensions of self interact. How can the self be aware of its freedom as a moral agent within the noumenal domain without claiming any knowledge of the content of its own representations (denied under the prohibition of knowledge of the thing-in-itself) as an I-in-itself? As Henry Allison sums up the problem: "... what is needed is an account of empirical character that enables us to regard it as in some sense an expression or manifestation (and not simply a result) of an intelligible activity, without requiring us to assume that it yields any insight into the true nature of that activity."¹⁷⁵

A solution can be found in part through Kant's method of describing the process of rational thought. Rather than defining the self in terms of the content of experiences

¹⁷⁴ Kant's critique of Descartes' philosophy of self in the paralogisms is addressed by Henry Allison in *Kant's Transcendental Idealism, op cit.*, 333 – 356.

¹⁷⁵ Henry A. Allison, *Kant's Theory of Freedom* (Cambridge MA: Cambridge University Press, 1990), 32.

through a cogito, a thinking thing, Kant instead speaks of the “I think” that accompanies all of our representations.¹⁷⁶ From the capacity to assume a number of different perspectives, the thinking self is able to universalize, to consider different imaginary or hypothetical situations under which the application of moral law could be conducted, to establish, a priori, e.g., the differences between frameworks of accounting principles or banking laws and the content domains these frameworks are meant to control or govern.

The power of the intelligible self is also clearly seen through Kant’s principle of moral autonomy. If heteronomy provides the context of our limitation to empirical causality, then autonomy expresses the necessary moral authority exercised by the fully individuated self to self-legislate and commit itself to moral law and self-generated maxims. Autonomy thus provides the metaphysical grounds for the separation of interests between individuals.¹⁷⁷ When man legislates for himself, he is not under the influence of any other will and so acquires a sovereign authority. In an advanced industrial society man will be bound more intricately to technology as part of his means of survival and as a crucial part of the pleasures through which he defines his own personal self-fulfillment as a member of that society. He thus becomes subject to the dangers of overworking, overspending and overconsuming as outlined by Dr. Juliet Schor.¹⁷⁸ As his heteronomous links to his society and its economic system increase, his

¹⁷⁶ Kant’s difficulties with his theory of self, one that had to limit self-knowledge to the empirical domain while expanding the domain of self-awareness into the noumenal realm to cover the content of issues pertaining to pure practical reason, is covered in H.J. Paton, *op cit.*, 233 – 238.

¹⁷⁷ For Morris Miller, this problem is related to the difficulty Kant has with balancing the moral autonomy achieved through the metaphysics of freedom with empirical self-dependence to be realized under the self-sufficiency condition. F. Morris Miller, *Kant’s Doctrine of Freedom* (London: George Robertson and Company, 1913), 176 – 177. The issue of individuation is also addressed by Onora Nell (O’Neill) with respect to supererogation. Onora Nell, *Acting On Principle: An Essay on Kantian Ethics* (New York: Columbia University Press, 1975), 94-96. Cf. also Stephen Körner, *Kant’s Conception of Freedom* (London: Oxford University Press, 1967).

¹⁷⁸ Juliet Schor, *op cit.*

commitment to autonomy is in danger of weakening. It can only be preserved by deliberate acts of will which, in their moral and metaphysical dimensions in the intelligible world, are brought about through synthetic a priori propositions, the process by which the autonomous agent deliberately binds his will to moral principles through a process of self-legislation and self-commitment. In the process of the “I think” accompanying representations and moving from one framework perspective to another, the self is defined through its structures and moral frameworks as much as through the content of its representations.¹⁷⁹

Kant’s efforts, from a historical standpoint, cannot be judged a success. As noted earlier, his efforts to individuate the self through transcendental idealism came under attack in the mid-1790’s, even before his complete moral theory had been fully formulated.¹⁸⁰ Fichte began the process, completed by Hegel, of establishing the grounds of an “Absolute Spirit” of whom the individuated will could partake. As British idealist philosopher F.H. Bradley summed up the problem of Kantian ethics: “However much we tried to be good, however determined we were to make our will one with the good will,

¹⁷⁹ H.J. Paton comments on this difficulty: “In dealing with the objects of outer sense we supposed that our mind must be affected by a thing-in-itself which is other than our self. In self-knowledge we come up against the strange paradox that the mind must somehow be affected by itself.” Paton, *op cit.*, 235. Paton then draws an analogy with the infinite regress problem of the historian who records a causal series of events while the process of actually writing the history is an inescapable element of that history. The difficulty for Paton centres on Kant’s process of apperception, under which self-awareness is generated through the process of gaining understanding through the senses by the “I think” that accompanies all representations. Kant has already denied Descartes’ theory of the substantial nature of the self in the Paralogisms. Self-awareness must now be understood as “a pure activity of synthesis in accordance with certain necessary principles. One difficulty of this is that pure activity, as merely conceived in abstraction from all its sensible accompaniments, must be conceived as timeless....” (235) At the same time this conception contradicts the empirical understanding of the process of thinking, which is defined as “a succession of mental states in time.” (236).

¹⁸⁰ Karl Ameriks, *The Fate of Autonomy*, *op cit.*, 13 – 21. In general, Kant’s successors (Fichte, Reinhold, Hegel, etc.) could not accept the sharp division between the noumenal and phenomenal realms necessitated by transcendental idealism. Fichte, in particular, joined Kant in arguing for the primacy of practical reason, but asserted that it could not be based upon an unknowable noumenal realm existing apart from the subject.

yet we never succeeded. There was always something left in us which was in contradiction with the good.”¹⁸¹ The power of the Cartesian self has had various revivals (e.g., in the works of Edmund Husserl, Jerry Fodor and Noam Chomsky) and many critics (Ryle, Dennett), but the Kantian project to sustain a powerful version of an autonomous, fully individuated moral agent through transcendental idealism has not survived. The goal throughout the rest of this dissertation will be to revive its viability as a means of understanding and addressing issues resulting from the failure of the twin assumptions associated with the Enlightenment project.

The establishment of the principle of reciprocity between the moral authority of the self and the political authority of the state is thus based on the primacy of right action, the authority of practical reason and the individuation of the self. Later it will be shown through a fuller development of Kant’s moral philosophy how this reciprocity is derived from an even more basic reciprocity between freedom and morality and how it fits in the wider context of Kant’s moral and political philosophy. At the end, a more fully detailed account will be provided with respect to the alignment of Kantian ethics and moral realism. In the next chapter the road to this objective will be established by setting forth the metaphysical foundation of Kant’s ethical theory in more detail.

Superseding Instrumental Rationality Through the Power of Moral Autonomy

As noted the empowerment of the individual agent by embedding moral authority and sovereignty in the self is essential to the establishment of a strong reciprocity between citizen and state through the primacy of right action. However, it also reflects

¹⁸¹ F.H. Bradley, *Ethical Studies* (Indianapolis: Bobbs-Merrill, 1951), 111. Interestingly, this is not an assessment that Kant would have disagreed with. Bradley’s interest, reflecting the general interest of late nineteenth century moral philosophy, was in a standard of the good that could genuinely be achieved.

the full separation of theoretical and practical reason, which in Kant's view was crucial to empowering the latter over the former. Aristotle had argued for a natural coherence between the two, and as has been noted, this provided the basis for later empiricist claims on behalf of instrumental rationality. The relationship between the empirical self and the material world is one driven by desire and preferences, with theoretical reason serving this relationship and dictating the means to the ends set by the passions through practical action. The Enlightenment project and its twin assumptions, as well as beliefs in ongoing prosperity through the imperatives of growth, are largely built on this relationship.

Rousseau and Kant rejected it, as noted earlier in this chapter. Rousseau foresaw the corruption of social virtues and human character. Kant predicted the entrenchment of "radical evil,"¹⁸² as market agents used hypothetical imperatives to pursue acquisitive and self-destructive maxims. For Rousseau as for Hume the solution lay in the path back into the emotions, since neither could see an alternative to theoretical reason and the service rendered to material preferences by instrumental rationality. For Enlightenment thinkers the correct solution could be found in the establishment of constitutional frameworks that guaranteed the rights of man. This ideal of setting the right before the good would later become the justification of free market structures through the protection of property rights. The "pursuit of happiness" would entrench the power of instrumental rationality by privileging the role of market agents over that of the citizen who, in Kant's belief, should be deeply concerned for the long term project of establishing "final ends."

Thus, to the extent that structural frameworks could function reliably for free markets and for constitutional systems of governance, instrumental rationality could be

¹⁸² Kant's concept of "radical evil" is elaborated in *Religion Within the Limits of Reason Alone* 6:29 – 6:32

empowered to maximize the good; to the extent that such frameworks were not reliable and agents gained the power to “act into markets” or “act into nature,” then human reason would have to transcend its instrumental limitations and through specific acts of rational and conscious deliberation become focused on the “final ends” of the society that had brought these structural frameworks into existence in the first place.

In short, practical reason would have to gain an authority over theoretical reason. It would have to generate its own principles independently of theoretical reason through the fact that rationality does have a normative dimension. It would have to motivate the search for “final ends” through such normative rationality and not through preferences or desires. Kant saw that privileging practical reason entailed empowering the individual agent in his capacity as citizen and not as market agent, and citizens needed this power to create a balance between the moral authority they exerted as a civil society and religious community and the political authority exercised by the state. In this Kant demonstrated remarkable prescience, anticipating a future of technological complexity in which experts gained authority over common citizens on specialized issues that carried more weight with government officials under the imperatives of instrumental rationality than issues focused on the establishment of “final ends.”

But a world driven by expertise is an empirical world, and what Kant wanted was a community whose standards were formulated by independent and equal citizens. Such citizens would have to possess a powerful sense of autonomy that was not based on the conditions of an empirical self but on a metaphysical balance of freedom and autonomy that opened up the force of a pure practical reasoning able to exercise an authority over theoretical reasoning. Such a transcendental force of reason could elucidate universal

laws not dependent upon material conditions and thus address formal issues related to conflicts between principles of sustainability and the imperatives of economic growth, between precautionary and proactionary principles.

What Kant grasped more fully than most is the fact that a rationality that is fully normative is a rationality that never ceases the application of reason – even to the extent of our understanding of reason itself.¹⁸³ It is not enough to claim that a certain belief should be held or a certain action performed under the dictates of reason. The contexts and conditions of possibility for all such beliefs and actions have to be examined, justified and subjected to tests of sustainability or impartiality. The idea that private vices can be transformed into public goods requires tests of reason that are continuously applied to the structural frameworks that make these applications of instrumental rationality viable. The breakdown of sub-prime mortgage markets or potential failures of nanotechnology exhibit the importance of a reason motivated by considerations set apart from those of private preferences. Reason must be committed to the rational analysis of reason itself; it must rationally assess reason applied instrumentally based on reason as an intrinsic value. Kant saw that only a pure practical reason was capable of these higher-order functions through “the revelation of the supersensible world.”¹⁸⁴

The establishment of a metaphysical foundation for such an ethical rationalism capable of this kind of a priori reasoning to be exercised by fully autonomous agents is the subject of the next chapter. Such agents must be capable of taking this metaphysical

¹⁸³ As Kant states: “The critique of pure reason may be regarded as the highest tribunal for all speculative disputes; for it is not involved in those disputes, which have an immediate relation to certain objects, but is instituted for the purpose of determining the rights and limits of reason.” *Critique of Pure Reason* [A750/B778].

¹⁸⁴ *Critique of Practical Reason*, Abbot trans. [224], 187 – 188.

dimension of Kant's ethical theory and putting it into practice in a modern technological world. That will be the subject of the final chapter.

CHAPTER 4: THE METAPHYSICAL DIMENSIONS OF KANTIAN ETHICS

Introduction

The previous chapter addressed a number of difficulties faced by Kant's critical theory with respect to freedom, the possibility of pure practical reason and its authority over theoretical reason. Kant requires an a priori analysis of history to make possible his proposals for establishing permanent peace and the kingdom of ends over the course of several generations. However, the preservation of the individuated self as crucial to the concept of autonomy is, as argued in the last chapter, the most problematic element of his metaphysics. It appears to require a substantive understanding of the non-empirical self, which in turn is needed as a vital centerpiece of Kant's ethical theory, since it is this self which must access the noumenal realm and thereby formulate categorical imperatives.. Overcoming the metaphysical difficulties of Kant's theory of the self that emerge in the first critique is thus important in realizing the gains of autonomy through pure practical reason in the second critique. Chapter four takes up the task of establishing metaphysics as the basis for Kantian ethics, and an important component of this project, which will be developed in more detail in chapter five, is the concept of synthetic a priori propositions. The possibility of such propositions is important for making the project of transcendental idealism viable, for it is by this means that we gain knowledge of appearances through theoretical reasoning, while being denied knowledge of things-in-themselves.

The synthetic a priori becomes the basis for transcendental idealism because these propositions are central to the way the mind imposes order on reality. Kant's "pure concepts of the understanding," i.e., quality, quantity, substance, causality, etc. are thus part of the internal structure through which external sense experience is organized by

rational agents.¹⁸⁵ It is for this reason that Kant rejects Descartes' belief in the self as substance, for substance cannot be a metaphysical attribute of the self if it is part of the very structural elements by which the self organizes its world. Thus Kant, the champion of synthetic a priori propositions, rejects the very possibility that we can gain knowledge of the self through them, since the self is the origin of these organizational principles. As noted, this creates inconsistencies that were used by Kant's detractors.

The importance of synthetic a priori propositions extends to Kant's moral theory as well. Here, Kant was faced with the challenge of bridging the gap between, on the one hand, the metaphysics of morals – the central principles of ethics that must be determined a priori – and, on the other hand, practical anthropology – our empirical knowledge of how rational beings actually behave.¹⁸⁶ The categorical imperative itself is a synthetic a priori proposition, and its formulation is claimed to help bridge the divide between the metaphysical and empirical domains of Kantian ethics. For theoretical reason, synthetic a priori propositions gain their a priori dimension by transcending the empirical realm (e.g. “every event has a cause”); for practical reasoning, these propositions make possible a negative access to the noumenal realm as the source of the capacity for rational agents to

¹⁸⁵ The difficulties that Kant encounters in maintaining a consistent portrait of the transcendental self without falling into paradox and contradiction were well summarized by Frederick Copleston: “When Kant spoke about the subject's construction of experience, he was talking about the individual subject. True, he introduced the concept of the transcendental ego as a logical condition of experience; but here again it was the individual ego that he was thinking, the ‘I’ which is always subject and never object. But if we transform this logical condition of experience into a metaphysical principle which creates the object, we can hardly identify it with the individual finite ego without being involved in solipsism. For John Smith all other human beings will be objects, and so they will be his own creation. For that matter, John Smith as object, as a phenomenal ego, will be the creation of himself as transcendental ego. If, therefore, we eliminate the thing-in-itself and transform Kant's transcendental ego, a logical condition of experience, into the supreme metaphysical principle, we are driven in the end to interpret it as the universal infinite subject which is productive both of the finite subject and of the finite object. And at once we are involved in a full blown metaphysical system.” Frederick Copleston, *A History of Philosophy*, vol. vi. (New York: Doubleday, 1994), 431- 432. Copleston thus vindicates the rejection of transcendental idealism by Fichte and Hegel, and shows how Kant's difficulties with self-individuation lead to its abandonment.

¹⁸⁶ Allen Wood, *Kant's Ethical Thought*, *op cit.*, 14.

initiate self-caused, morally deliberated actions into the empirical realm. The bridge thus built by the categorical imperative thereby spans the gap between metaphysics of morals and practical anthropology. It originates with the recognition of moral laws, principles and maxims that must apply universally; it then generates the motivation to action through duties that build the virtues evident in human behavior and thereby create the possibility of happiness. Synthetically, categorical imperatives contribute to knowledge in the form of the objects created by pure practical reason, that is to say, the ideal objects of goodness, the states of affairs that ought to be the case because they must be the case.

States of affairs that must be the case are closely associated in Kant's philosophy with transcendental arguments, which take some unquestionable fact about experience or the status of our knowledge claims and then cite a non-empirical condition as irrevocably necessary as a condition of possibility for this fact of experience, thereby establishing the enabling condition as equally beyond question. Kant used such arguments in the *Critique of Pure Reason* to refute idealism, counter skeptical attacks, and establish causation as a pure concept, among other purposes. Since, under Kant, the categorical imperative itself is deemed to be a synthetic a priori proposition, it thus facilitates the construction of its own transcendental arguments. To take and adapt an example provided by Kai

Nielsen:¹⁸⁷

If we are human beings, we must organize our lives around notions of truth and falsity, as well as universal principles of sustainability, impartiality, etc.

We are human beings

We must organize our lives around these notions and principles.

This argument is structured to fulfill all three formulations of the categorical imperative, as well as establish the necessity of non-empirical states of affairs that not only must be

¹⁸⁷ Kai Nielsen, *On Transforming Philosophy: A Metaphilosophical Inquiry* (Boulder, Colo.: Westview Press, 1995), 48.

the case, but ought to be the case as well. The necessity conveyed is moral, not empirical in nature, since we can conceive of human beings actually disregarding these conditions. (The test of moral necessity holds because of the self-destructive consequences that vindicate Kant's imperative for realizing the kingdom of ends.) The use of the synthetic a priori and transcendental arguments is vital for Kant's mandate for pure practical reason to actively create its own "objects," in contradistinction to the sense data pressed upon theoretical reason by the experiential world.¹⁸⁸ (In the Kantian world, such objects of goodness begin with the good will; however, chapter five will pursue the claim that such objects can be extended to the creation of possible worlds that must be actualized in the future if the problems pertaining to the collapse of Enlightenment assumptions as outlined in chapter two are to be overcome.)

Kant's mandate in applying the categorical imperative and using synthetic a priori propositions in order to bridge the gap between the metaphysics of morals and practical anthropology is based on the way that deductions can move from analytic propositions to synthetic ones, given that synthetic propositions will be needed to demonstrate the conditions under which we can, in fact, become free and rational moral agents. Kant utterly rejected the claims of Spinoza and other rationalists that we can analytically deduce actual moral laws from concepts, e.g., pure practical reasoning or the perfectly good will. Synthetic judgments must generate the content of rules and maxims. (The

¹⁸⁸ Both the synthetic a priori and transcendental arguments have been longstanding subjects of philosophical debate. A frequent charge is that the synthetic a priori knowledge must always be based on prior claims to synthetic a priori knowledge, thus creating an infinite regress or relying on some foundational claim to intuitive insights. With the case of the categorical imperative, the charge of intuitive foundations has been disputed by Nelson Potter, "The Synthetic a Prior Proposition of Kant's Ethical Philosophy," *Annual Review of Law and Ethics* vol. 5 (1997). In the twentieth century G.E. Moore made synthetic concepts the basis of his "open question" argument, thus carving out a vital role for metaethics, and resisting the claims of ethical naturalism that "utility" and "right" are coextensive concepts to be derived analytically.

empiricist claim that the categorical imperative is incapable of yielding any content at all is in some degree due to the denial of the possibility of synthetic a priori propositions.)

Kant's generation of states of affairs that both ought to be the case and must be the case can also be understood through the central weakness in Kantian ethics: i.e., its philosophy of self. As a result of the dichotomy between the noumenal and phenomenal dimensions of the self, Kant conceded that we have considerable uncertainty about the nature of our introspective mental states.¹⁸⁹ However, in Kant's view, these weaknesses are more than overcome by the structural elements of the self (determined through synthetic a priori reasoning) that must exist in order for the self to bridge its noumenal and phenomenal dimensions. First is Kant's concept of transcendental apperception, through which the "I think" – Kant's substitute for Descartes' strong notion of self – accompanies all of one's empirical representations and makes self-awareness possible. Second, the structural capacities of reason (exercised in the first instance through the pure concepts of the understanding) make possible not only a posteriori knowledge of the empirical world, but also a priori knowledge pertaining to the conditions of possibility of all knowledge, an epistemological dimension made possible by transcendental arguments.¹⁹⁰ Reason thus has the power to navigate all structural levels of knowledge, including the capacity to critique the capacities and limitations of reason itself.

This critical power of reason would thus be irredeemably weakened and the magnitude of human freedom diminished if this domain of reason were limited by the content of mental states or innate ideas that reason could not – in the words of Thomas

¹⁸⁹ Immanuel Kant, *Lectures on Anthropology*, 7:121. Cf. also Allen Wood, *op cit.*, 182.

¹⁹⁰ Kant famously begins the *Critique of Pure Reason* by arguing that all possible cognition must begin with experience (A1/B1), but there is a difference between a priori knowledge that begins with experience and empirical knowledge that is fully constituted by such experience. Cf. also Allen Wood, *op cit.*, 56 – 57.

Nagel – “get outside of.”¹⁹¹ Kant’s full acceptance of Hume’s problem of induction means that nothing can be assumed to function automatically or under nomological, law-like forces, including Adam Smith’s invisible hand or Edmund Burke’s belief that certain social and political traditions must be placed beyond the purview of rational criticism.

These fundamental tenets are the foundation for Kant’s transcendental idealism, but his beliefs in the causal forces of nature that necessarily transform one state of affairs into another also drove his view (first articulated in the third antinomy in the *Critique of Pure Reason*) that a similar causality lay at the root of the process by which practical reason engages the moral law through freedom. The difference is that practical reason is characterized by its power to constrain its actions under the authority of moral law through intentional decisions. Thus, as Allen Wood notes, reason subordinates itself to the authority of reason through a critique of that very authority, just as it submits itself to the authority of the laws of logic through a critique of that very authority.¹⁹²

This line of thinking led Kant to a central problem addressed in the *Critique of Judgment*: how to reconcile the causality of nature with the causal impacts of practical reason. Just as the causality of natural law results in the transformation of one state of affairs into another, so too must the causality of human freedom result in the formulation of states of affairs that ought to be the case and must also hold of necessity as the result of moral imperatives determined through a priori reasoning. But Kant went beyond this claim to argue that because the human race had a destiny to realize the full power of its

¹⁹¹ Thomas Nagel, *The Last Word* (Oxford: Oxford University Press, 1996). Kant’s rejection of innate ideas is found in his essay “On a Discovery According to Which Every New Critique of Pure Reason is Made Dispensable by an Older One.” 8:221.

¹⁹² Allen Wood, *Kant’s Ethical Thought*, 175. This would seem to commit Kant to a version of epistemic deontology and thus clearly commit him to a form of moral realism, as Wood in fact argues. (157).

rationality through the determination of final ends, nature must exist as an end-in-itself in order to realize the ultimate objective of human freedom. As Kant notes:

If now things of the world, as beings dependent in their existence, need a supreme cause acting according to purposes, man is the final purpose of creation, since without him the chain of mutually subordinated purposes would not be complete as regards its ground. Only in man, and only in him as subject of morality, do we meet with unconditioned legislation in respect of purposes, which therefore alone renders him capable of being a final purpose, to which the whole of nature is teleologically subordinated.¹⁹³

Thus the natural world and the laws of biology and physics all exist in order to create the conditions of possibility for the realization of man's rational destiny – and man could not reach this awareness through the confines of empirical knowledge. It required an exercise of synthetic a priori propositions exercised through transcendental arguments to reach these conclusions.¹⁹⁴ Through the universal imperatives of morality man became aware of the teleological purposiveness of nature.

Here it possible to press Kant's argument beyond its explicit conclusion in order to postulate a full reciprocity between man and nature that would have cohered with Kant's rationalized version of Rousseau's thesis of this relationship. For if nature provides the conditions of possibility for human destiny, then men in turn, planning for perpetual peace and the implementation of the kingdom of ends, would be rationally and

¹⁹³ Immanuel Kant, *Critique of Judgment*, J.H. Bernard, trans. (New York: Hafner Publishing Company, 1966), [84] 286.

¹⁹⁴ Kant is, however, faced with a well known difficulty – first raised by Henry Sidgwick – if he presses the power of rationality through transcendental arguments too far. If men are compelled towards the pursuit of objective moral values and purposes, they are required to engage the noumenal standpoint to a degree that would seemingly force all of our empirical behavior to be a consequence of that standpoint. In effect we must necessarily become “perfectly good wills” in Kant's sense and all of our behavior must meet the demands of morality. Since this is self-evidently not true, it follows that we cannot be responsible for our immoral behavior. Sidgwick's argument has recently been revived by Paul Guyer in *Kant's Groundwork for the Metaphysics of Morals* (Bodmin, Cornwall: MPG Books Ltd., 2007), 160 – 162. Allen Wood rejects this position, arguing that it entails the claim that the will acts freely only if it is in compliance with the moral law, along with the corollary claim that violations of the law cannot be the acts of a free will. (Wood, *op cit.*, 174.) This is a position directly contradicted by Kant's concept of radical evil.

morally compelled to pursue sustainable policies with respect to the natural world. This would be especially true with respect to man's modern powers to act into nature, wherein man gains the capacity to alter the structural constituents of the natural world in ways that often cannot be anticipated. With respect to man's increased capacity to use science to increase human prosperity, a number of moral imperatives emerge that require men to identify states of affairs that both ought to be the case and that must hold of necessity.

In the end, a reasonable claim could be advanced that the vagueness of Kant's concept of the self in its noumenal and phenomenal dimensions does not weaken his ethical theory, but paradoxically strengthens it through gains in the structural power of reason that compensate for the uncertainties accorded to our intuitions, mental states and innate knowledge, if such there be. What counts is not so much our actual belief states, since these may have been shaped by unquestioned traditions or dogmas; what matters is the structural processes of *a priori* reason that generate and vindicate these beliefs. As

Alen Wood notes:

The Kantian *a priori* in practical philosophy is therefore precisely the opposite of what empiricist caricatures represent when they say that philosophers believe in the *a priori* only so as to hallow their received prejudices and immunize them against critical examination. For Kant, *a priori* principles are precisely those principles generated through our own thinking. They contrast to principles we owe to external sources, such as tradition, authority – or experience, which, apart from the use we make of it through our critical capacities of reason, would be equally a source of blind prejudice. That is why Kant associates *a priori* practical principles both with the idea of autonomy and with the maxim of enlightenment: always to think for oneself.¹⁹⁵

Unfortunately, the “empiricist caricatures” would continue, especially with subsequent efforts to de-transcendentalize Kantian philosophy. However, given these preliminary

¹⁹⁵ Allen Wood, *op cit.*, 60.

remarks, the examination of the metaphysical foundation for Kantian ethics can now proceed.

Re-establishing Metaphysics as the Basis for Kantian Ethics

In building the case for the application of Kantian ethics to modern concerns relevant to the failure of Enlightenment assumptions, a stronger basis for a metaphysical application of Kant's theory has become necessary. Since most recent approaches have attempted to establish a more empirical, "de-transcendentalized" version of Kantian theory and thus repudiate the metaphysical approach, a brief survey of some key issues is now required.

Empiricist critiques of Kantian ethics have been steadily recurrent since Kant's lifetime. Bernard Williams, arguably the most insightful of Kant's modern critics, has challenged what he considers the excessive impartiality of all objective theories, claiming that they leave insufficient room for agent specific concerns.¹⁹⁶ (This is refutable; Kant does leave room in his Doctrine of Virtue.¹⁹⁷) Hegel, on the other hand, joined Kant's late contemporaries in challenging transcendental idealism as the foundation for the

¹⁹⁶ Bernard Williams, *Ethics and the Limits of Philosophy* (Cambridge, Mass.: Harvard University Press, 1985).

¹⁹⁷ Williams' specific criticisms of Kant are focused on the emphasis on agent relative concerns, an emphasis so strong that if Kant's position could be made to conform to that of Williams, then the Doctrine of Virtue would exhaust the entirety of Kant's moral philosophy. For Williams, the agent's life projects are all-consuming and cannot be impinged upon by the universal principles of impartial moral theories such as utilitarianism and Kantianism. In a very real sense, then, the agent cannot "get outside" of his own inclinations and desires in order to accept or even recognize the imperatives of categorical duties. In Williams' view, the beliefs we acquire from theoretical reason are generally provisional and subject to change, but the same is not true of our desires, against which we are not capable of assuming a self-critical stance. Therefore, Williams does agree with Kant's division of theoretical and practical reason, but claims that Kant has entirely misconstrued it; i.e., that there is no possibility of a pure practical reason capable of overruling our desires. Bernard Williams, *Ethics and the Limits of Philosophy*, 64 – 67. See also Bernard Williams, "Persons, Character and Morality," in *Moral Luck* (Cambridge: Cambridge University Press, 1981). The relationship of Williams' critique of Kant's moral philosophy to that of Hegel's is examined by Henry Allison, *Kant's Theory of Freedom*, *op cit.*, 191-198.

entire critical enterprise and further argued that duty could not exhaust moral action if no room was left for private inclinations.¹⁹⁸ His longest lasting criticism has been his claim that the categorical imperative is both formally deficient and incapable of generating moral principles.¹⁹⁹ Modern thinkers have taken various renderings of this argument.²⁰⁰

William J. Talbott has argued that we would have been able to pursue two programs in moral philosophy had the categorical imperative been operative.²⁰¹ What Talbott describes as “the deduction project” recycles a standard objection²⁰² against Kant that the principles derivable from such an imperative should be able to demonstrate circumstances in which it cannot be rational to act immorally in pursuit of one’s objectives. One of the strengths of the arguments in chapter two depicting the conflicts inherent in empirical rationality (e.g. LTCM investments) is, if these arguments are successful, their capacity to demonstrate this very phenomenon. From either a long or short term perspective it may be completely rational to pursue a given endeavor according to the dictates of one’s interest; however, the activity would, under such

¹⁹⁸ Karl Ameriks, *Kant and the Fate of Autonomy*, *op cit.*, 273 – 276.

¹⁹⁹ *Ibid.*, 309 – 330. One interesting variation is the claim that the principle can be judged by any failures in its application. Often this approach fails to account for the Kantian caveat that applications of the higher order principle require the engagement of other principles. For example, one can support freedom of speech as a higher order principle, but such support tells you nothing about a particular political policy, party or candidate you believe you should support. A very famous example of the misapplication of this higher order principle occurred in the 1980’s when Noam Chomsky signed a petition defending the rights of freedom of speech of Robert Faurisson, a holocaust denier. Chomsky’s remarks were misinterpreted as supporting holocaust denial. Simon Blackburn commits the same offence with the categorical imperative, arguing that its higher order strictures about the repayment of debt mean that credit card holders should repay their outstanding balances every month, a practice that would actually endanger credit card borrowing, the profitability of which depends upon card holders delaying debt repayment. Simon Blackburn, *Being Good: A Short Introduction to Ethics* (Oxford: Oxford University Press, 2001), 122.

²⁰⁰ Many critics from Schopenhauer to Philippa Foot have been generally supportive of the concept of a hypothetical imperative while expressing skepticism as to the possibility of categorical imperatives. Foot, for example, argues that the rationality of morality is only possible through hypothetical imperatives.

²⁰¹ William J. Talbott, “Why We Need a Moral Equilibrium Theory,” in *Modeling Rationality, Morality and Evolution*, Peter A. Danielson, ed., (Oxford: Oxford University Press, 1998), 302.

²⁰² Kai Nielsen, *On Transforming Philosophy: A Metaphilosophical Inquiry*, *op cit.*, 222. Nielsen phrases the problem in terms of “why rational agents must accept rational morality.” In short, it must be shown “why a rational person, no matter how she is situated, must comply with the dictates of morality. Morality might be in *accordance* with reason without being *required* by reason.”

conflicts of rationality, prove irrational under the opposite perspective, long or short term, thus rendering the prudence of the endeavor irrational in toto. On the theory advanced in this dissertation one must take an a priori perspective from the standpoint of moral rationality to analyze the contradiction. The second program, the reduction project, is highly important, but is one for which this dissertation can offer no answer. Talbott here seeks a method of determining how the moral permissibility of an action can be determined on the basis of its non-moral features. Kant's theory can, in fact, provide the means for subjecting hypothetical imperatives to tests of universalization (through the categorical imperative), but Talbott is right to the extent that issues pertaining to the complexity of modern technology have made this test extremely difficult and complex. Thus, Kantian and consequentialist theorists will have to collaborate to find common grounds on which categorical imperatives can be successfully utilized to overcome gaps between the ideal states of affairs that consequentialists envision and the necessary states of affairs that must be brought into existence under the dictates of pure practical reason.

The Road from Hypothetical Imperatives to Synthetic a Priori Propositions

The key point lies in the fact that hypothetical imperatives have, in fact, changed in their nature, becoming vastly more complex since Kant's time.²⁰³ At the end of the eighteenth century, they would have been fully consistent with Adam Smith's cohesion

²⁰³ Kant's concern with delineating categorical from hypothetical imperatives extends, as noted earlier, to historical studies, where Kant was keen to establish a method of a priori analysis. Kant's historical interests do not, however, seem to have extended to the study of ancient commerce. Despite his extensive knowledge of ancient Roman and Greek philosophy (especially ethics), Kant apparently did not discover many viable examples of commercial practices that would have supported his own political theories. While most economic activity in ancient times was agrarian based and strictly controlled under local political jurisdictions (in line with Kant's own beliefs in the reciprocity of state and property), a great deal of foreign trade conducted throughout the Mediterranean was based on the existence of trade entrepôts and exclusion zones not subject to any government regulation and therefore clearly in violation of Kant's doctrine of right. Cf. W.W. Tarn, *Hellenistic Civilization* (New York: St. Martin's Press, 1952), 264ff.

model; i.e., they would have been fully reflective of the ambitions of private citizens to enter into market activities for the purposes of earning and trading for necessary goods.²⁰⁴

Thus the concept of hypothetical imperatives works best when it focuses on rational objectives expressed in terms of the *content* of goods and services that are the subject of rational preferences of market agents when such preferences are directed towards real necessities. However, in today's world, rational self-interest can instead be directed towards creating or altering the frameworks or infrastructures by which goods and services are to be obtained (e.g., building out global networks of fiber-optic cable in the late 1990's). There are thus many examples of hypothetical imperatives that acquire an extremely crucial importance because of their relationship to vitally necessary infrastructure (e.g., deregulation of electric power in Canada and U.S.). We can thus be faced with vital decisions with respect to hypothetical imperatives that come into conflict and thus crowd out or preclude the formulation of attendant categorical imperatives.²⁰⁵

The instances of potential universal principles demonstrated in chapter two exemplified concepts taken from business practices that achieve a nomological force

²⁰⁴ Kant's knowledge and approbation of Adam Smith's philosophy clearly extends to Smith's *Theory of Moral Sentiments*, but not so clearly to *The Wealth of Nations*. [(Cf. Marcus Herz's correspondence to Immanuel Kant dated July 9, 1771, in *Immanuel Kant: Correspondence*, Arnulf Zweig, trans. and ed. (Cambridge: Cambridge University Press, 1999), 130. Cf. also, Norman Bowie, *op cit.*, 9, fn.2.] Kant's acceptance of Smith is likely an "approval by association" with Hume, given Kant's rejection of moral sense theory and the Scottish School of Reid and others. Kant's interest in economics was generally limited to examples that supported his political beliefs: his rejection of colonialism and his examples of the "honest tradesman" and the repayment of debts (as an example of the categorical imperative). His interest in money was limited to the character traits of greed and avarice, which found their way into his doctrine of virtues. Kant did share with Adam Smith the standard eighteenth century belief that economies were built upon agrarian foundations, and that rural enclaves of town and country provided ideal examples of civic communities. However, Kant differed crucially from Smith and Edmund Burke in his rejection of the role of tradition and the need for unconscious acceptance of longstanding customs and beliefs that were thought to provide an important foundation of civilization. Kant's uncompromising convictions with respect to the imperatives of rational critique were not to be so constrained and could never be compromised.

²⁰⁵ In her highly influential essay, "Morality as a System of Hypothetical Imperatives," Philippa Foot affirms the validity and importance of hypothetical imperatives, while accepting the standard criticisms advanced under Talbott's deduction project. [From *Virtues and Vices and Other Essays in Moral Philosophy* (157-173) (Oxford: Basil Blackwell, 1978).]

through the metaphysics of synthetic a priori propositions. The examples of “acting into nature” showed the imperatives under which theoretical science must take priority over practical science. The case of Long Term Capital Management (LTCM), used to exemplify the process of “acting into markets,” showed the emergence of universal principles that must hold when various derivatives and financial markets are bound together. Financial ethics and banking practices provide highly significant examples of these law-like, nomological forces, since banking itself must function as a framework industry to contain, control and direct the operations of standard businesses that rely on banks for lending, deposit and investing services. It must necessarily function as such a framework in order to ensure that interests of clients are appropriately separated. (Problems may occur when banks assert their proprietary interests, compromise their role as financial intermediaries, grow too large and distort competition through the exercise of markets power or allow their own interests to become mixed with those of their clients, and thereby lose their status as a framework business.)²⁰⁶

Once banking reached a certain degree of sophistication in the fifteenth century, double entry bookkeeping came into practice as a set of necessary procedures to provide

²⁰⁶ Some extrapolations of Kant’s approach to banking and trade are possible via a comparison with Adam Smith’s views. Kant had no vision of trade or wealth creation as intrinsically valuable as an end-in-itself, as is the case in Smith’s *Wealth of Nations*. Kant’s vision is one of self-reliant republican governments whose “self-sufficient” citizens are concerned almost exclusively with economic necessities, or at best with some equivalent of Rawl’s “primary goods.” (Kant’s view would thus best coincide with the modern economic concept of “national economies.”) Kant did not pursue anything remotely similar to Smith’s notion of “brimming pools” of national investment that “spill over” into foreign ventures once national economies are fully invested. However, Kant’s “self-sufficiency condition” is analogous with Smith’s “nation of shopkeepers” and his plan for the gradual evolution of republican governments around the world (“perpetual peace”) is co-extensive with Smith’s ideal of international trade for mutual benefit between peaceful nations. Both Kant and Smith had a dim view of the abuses of chartered companies operating in undeveloped areas of the world, and Kant’s “doctrine of right,” with its powerful emphasis on the coercive duties of governments and its recognition of the necessary foundations of external freedom, would likely have found favour with Smith. Kant would thus have to be construed as an enemy of modern globalization, given his extensive requirements for regulation and oversight of any system of economic organization. All such systems would, in Kant’s view, be required to service the kingdom of ends and work towards the treatment of all humanity as an “end-in-itself.” (Cf. Kant’s “state as proprietor” in *Metaphysics of Morals*.)

snapshot recapitulations of profit and loss. This created natural conflicts of rationality for banks, since the short term profitability of banks can be brought into conflict with long-term, prudential practice. (For example, a bank could maximize short term profits by granting loans whose ultimate disbursement is the purchase of its own shares, as occurred in the BCCI disaster of the 1990's.²⁰⁷) This problem can be overcome only through direct regulation and supervision of banking practices, but the ultimate moral authority for this approach must focus on the metaphysics of synthetic a priori propositions that stipulate that banks must function as framework businesses, and therefore these propositions must yield caveats stipulating that their activities must be closely monitored and regulated.

The synthetic a priori nature of these transactions can be understood through a hypothetical reconstruction of how they must have come into existence in the fifteenth century. The effort to organize transactions into a systematic whole to present an overall picture of profit and loss resulted in the classifications of various types of accounts representing specific sorts of transactions. Those accounts in turn could be organized into higher level classifications of “assets,” “liabilities,” “revenues,” and “expenses.” From these discoveries, the structure of balance sheets and profit and loss statements followed rapidly because of the obvious advantages they yield: the instant recapitulation of the financial health of the business in question, the immediate capacity to juxtapose payables and receivables, profit and loss.

²⁰⁷ BCCI secretly gained control of 56 percent of its own shares by internally generating over \$500 million. Financial Times Report, *Behind Closed Doors – BCCI: The Biggest Bank Fraud in History* (London: The Financial Times Limited, 1991), 5. Cf. also, Peter Truell and Larry Gurwin, *False Profits: The Inside Story of BCCI, the World's Most Corrupt Financial Empire* (Boston: Houghton Mifflin Company, 1992).

All of these discoveries would have been both empirical and synthetic in nature - allowing for the empirical applications of mathematics needed to produce the financial statements in question. The discoveries are empirical because they are directly linked to the tangible nature of the goods and services in question. The logical propositions that bind them together are synthetic because the concepts through which they are created are distinct from each other and the relationships between them must be specifically demonstrated; i.e., the concepts in question are not “contained” within each other as they are in analytic propositions.²⁰⁸ The valuations of the underlying goods and services are material in nature and are interrelated in unique and distinct ways that can be determined through the scientific analysis of economists.

However, once concepts such as “asset” and “liability” are abstracted from their underlying material values, they can then be seen as standing in certain relationships with each other that are not connected with these underlying values, relationships that are formal in nature and that yield inexorable laws and principles that must hold regardless of the specific material values that may be represented. Under accounting rules banks such as BCCI are morally prohibited from creating loans (assets) that are disbursed into share purchases (liabilities) that augment the value of the bank as a corporation on the one hand and generate phony interest earnings (revenue) on the other.²⁰⁹ Companies such as WorldCom are utterly prohibited from reclassifying bottom line “expenses” into top line “assets.” The principles and rules that govern accounting practices of this kind are seen as immutable, universal and generally distinct from the content of material values.

²⁰⁸ A full discussion of Kant’s understanding of concepts and their application to the synthetic a priori is found in Henry Allison, *Transcendental Idealism: An Interpretation and Defense*, revised edition (New Haven: Yale University Press, 2004), 78 – 82, 89 – 96.

²⁰⁹ The Bank Leumi scandal of 1982, which involved multiple Israeli banks, would be another example.

For the pioneers of double entry bookkeeping, it must have been clear that while the nature of their original discoveries were empirical in nature, they yielded principles and laws of a permanent, immutable nature, laws that must have always existed and did not simply come into existence with their discovery. The propositions and reasoning they had undertaken were thus *synthetic a priori* in nature. These pioneers are responsible for an indispensable achievement in efficient accounting practices that made the subsequent commercial and industrial revolutions possible, but they also would have recognized that these benefits of efficiency were possible only through the strict adherence to the laws and principles that created the conditions of their possibility. They would have, in short, recognized the importance of Kant's a priori reasoning and transcendental arguments.

In a different sense and under different processes of discovery, the evolution of money itself as part of macroeconomic frameworks became subject to synthetic a priori principles. Gold had its own natural qualities (high unit value, purity, homogeneity, etc.) that ultimately won recognition as superior to other commodities in its service as a medium exchange. The use of paper money to create a fiat currency in turn required specialized controls and legal restrictions of various types. In the late nineteenth and early twentieth centuries, central banking practices were developed in order to provide a framework for standard commercial banking operations dependent upon money.²¹⁰

All of these discoveries and developments in modern finance mirror, to a large extent, Kant's bifurcation of the moral domain between a metaphysics of morals on the

²¹⁰ The evolution of the U.S. dollar into an international key currency from the late nineteenth century and throughout the twentieth exhibits the patterns by which the attributes of any key currency can be analyzed through conceptual components; i.e., the role of a key currency as a transaction currency, an intervention currency and a reserve currency. As C. Fred Bergsten contends, each of these functions is conceptually distinct and analyzable only in terms of their unique attributes and the properties exhibited through their various interrelationships. C. Fred Bergsten, *The Dilemmas of the Dollar: The Economics and Politics of United States International Monetary Policy*, second edition (Armonk, N.Y.: M.E. Sharpe, 1996), 99 – 112. There is an essentialist tone to the analysis: the subordinate concepts are not reducible to the key one.

one side and a practical anthropology on the other. The former represent an overarching framework of permanent, universal principles that provide the governance structure for the latter, which in turn represents complex systems of organization developed over time through trial and error practices in real world situations. In accounting and finance, as well as in Kantian ethics, synthetic a priori propositions bind together the twin Kantian hemispheres of the metaphysics of morals and practical anthropology.

In these cases direct engagement with processes and relationships is required to ensure that structural activities themselves are properly undertaken and supervised, since conflicts of interest can be generated when framework/content distinctions break down. Such distinctions are not empirical but metaphysical in nature; they cannot be construed as arbitrary or as having evolved through social practice. They are metaphysical because their laws have nomological force and generate synthetic a priori propositions.²¹¹ As has been seen in the case examples, these law-like propositions must be explicitly formulated by the imposition of a moral duty to recognize the necessity of these distinctions between framework and content. There is, however, because of imminent conflicts of rationality, overwhelming pressure to ignore or work past these distinctions, to gain advantages for the large business enterprises in question because, as noted in chapter two, the very survival of such enterprises is often at stake. (A hypothetical imperative can thus be brought into conflict with a categorical one.). Since the potential damage for violating

²¹¹ It is also important to note that there is no structural necessity to apply the categorical imperative immediately to the content of given acts or behaviors. It is also possible for the categorical imperative to apply meditatively through another principle such as the precautionary principle. Thus, the categorical imperative could compel the application of a principle under a well defined set of circumstances, and the principle in turn could generate the content of actions. Clearly some universally overriding principle would have to be invoked in order to distinguish the relevant application of the precautionary principle – which imposes a burden of proof on innovators to demonstrate minimal probabilities of harm – from proactionary principles that privilege the very innovation in question.

these distinctions lies in the long term, the short term pressures for profitability or asset growth will frequently take precedence over longer range considerations.

The interaction of metaphysics and practical anthropology is also reflected in the relationship of hypothetical and categorical imperatives. The practical anthropology of economics and sociology tends to focus on the preferences of economic agents who seek to maximize their own interests within material contexts. Kant fully recognized this process and so developed the formulation of hypothetical imperatives to express the manner in which rational agents create “means-to ends” rules of action (maxims) to achieve this realization of their self-interests. The universalization of such maxims then leads to the categorical imperative, the point at which the entire process of rule formation moves into the moral dimension. The categorical imperative, with its emphasis on the logical coherence of maxims and their concern with autonomy, humanity, and ultimate ends, carries the focus of rational agents into the conditions of possibility for all social and personal existence – and this in turn reorients the human focus out of the material concerns of practical anthropology and into the noumenal domain that governs the metaphysics of morals.

These transpositions of focus were readily evident in the cases and practical examples discussed in chapter two, as well as in the conditions for transactional organization just discussed. It all starts with basic accounting practice, which provides the most fundamental framework for financial management. A great many accounting abuses can be traced back to efforts to falsely misclassify assets, liabilities, revenues and expenses, and it has been the contention of this dissertation that these classifications are not empirical or the result of social practice but pertain to a priori distinctions generating

rules that have full nomological force. But these rules do not operate in the same manner as the laws of nature. Violating or acting against laws of physics often carry immediate consequences that do not vary between short term and long term, but in accounting, rules can be violated in the short term and covered up either by direct accounting obfuscations or through the development of new financial products such as derivatives. Thus, the laws of nature are directly, consistently and immutably subjected to the forces of causality that rigidly conform to the analytical restrictions of logical conditionals (if the temperature of a given volume of water is reduced below 32o F degrees, it will freeze.) For Kant, any means-to-ends goals, projects, inclinations, interests or maxims adopted by agents with respect to natural causality must be subject to conditional propositions that the agent freely accepts; one must fully conform to such forces in order to achieve any predetermined end. But in business and accounting, one must deliberately choose to adopt moral principles that maintain consistency between short and long term rationality; there is no causal force that binds any such decision. The binding force therefore must be a moral force acknowledged by autonomous moral agents and respected as a moral necessity. Thus Kant's principle of the synthetic a priori must be brought to bear on all of these framework/content distinctions that apply in business and accounting.²¹²

²¹² Many other examples from international finance could be analyzed under this model, but clearly many would be problematic and not easily subjected to a Kantian analysis. For example, the Bretton Woods system could be construed as having a moral purpose that within a certain context could be seen as conducive to Kant's objectives of "permanent peace" and the construction of the kingdom of ends. However, the fixed exchange rate regime established by Bretton Woods, while highly conducive to embedding financial responsibility in developing countries and establishing national currencies as the framework for local economic development, also aligns incentives towards building massive speculations against such currencies in the event of projected devaluations. The power granted to developing nations to develop differing tax regimes created (in fact) incentives for multinational corporations to create profit structures that concentrated earnings in profit centres with the lowest tax rates. (Oil companies, for example, concentrated profits in shipping and minimized them in refining operations. In the 1990's Coca Cola was accused of concentrating profits in Puerto Rico and minimizing them in Canada, to the disbenefit of shareholders in Coca Cola Canada.) Yet floating exchange rates aggravated capital flight problems.

This complexity of these applications of Kant's principles becomes even more difficult in the field of insurance, which has been subject to numerous investigations in recent years. Insurance entails the ability to provide risk reimbursement in the event of unforeseen and calamitous events, the probability of which can be empirically measured through actuarial science. But the allegations raised in past investigations (e.g., AIG in 2003) imply that insurance companies have violated the framework/content division between accounting practices and the states of affairs they measure. Insurance risk, in principle, can cover specific events like property damage, disasters or theft that are real occurrences in the world. But they cannot, without violating a priori distinctions, be extended to cover financial results of the companies being insured. Financial results, must, by definition, exactly reflect underlying values and the state of the company's business, its solvency, asset value and profitability. Projected results should never be guaranteed through insurance, yet insurance companies are now alleged to have extended this protection both to arm's length companies and to themselves.

For insurance companies the net surplus of premiums earned over payouts provides the basis for determining financial viability, the extent of funds that can be invested to earn future returns and thus the basis for extending new insurance coverage. Thus, new forms of "finite insurance," or financial reinsurance, provide the basis for disguising what are essentially loans as insurance coverage/premiums. Smaller and weaker insurance companies have apparently been loading up on this coverage,²¹³

²¹³ Cf., "Company News; General Re, Reinsurer, Decides to Keep Investing Unit." *New York Times* May 6, 2000. In 2004, AIG paid fines of \$126 million to the SEC and was subjected to an investigation by the New York Attorney General's office for falsified reinsurance accounting involving General Re that involved \$500 million in loans from the latter being booked by AIG as insurance premium revenue. This allowed AIG to bolster reserves, as well as falsely inflating its net worth by \$1.7 billion. (The reinsurance falsification is based on the fact that AIG never assumed any actual risk associated with the insurance underwriting in question.) Bid rigging and related party transaction irregularities were also involved.

essentially paying premiums on hoped-for future earnings, on the anticipation that they can grow their way out of problems. Many companies are also involved in derivatives contracts with banks, further blurring the distinctions between loans, investments, derivatives and insurance. This problem has only become extensive since the late 1990's and has been magnified by mergers and consolidations between financial firms that have become possible since the repeal of the Glass-Steagall Act and other forms of legislation designed to maintain explicit, distinctions between various forms of financial services. All of this has been driven by extensive pressure during the 1990's to meet forecasted financial results and to achieve strength by building the size of enterprises quickly in order to gain advantages of market power.²¹⁴

The chief objection that can be brought against arguments that these regulations represent imperatives of a priori necessity lies in the claims of legal positivists and empiricists that regulations are brought into existence only as pragmatic responses to real world problems.²¹⁵ On this view everything from GAAP rules to product safety laws comprise a recognition of acknowledged business complexities, which in turn give rise to the need to protect the consumer against certain dangers. On this view rules are merely slaves to the practices that brought them into existence. "Necessity" is a metaphorical expression, not the edifice of a metaphysical reality. But if the case work cited in this dissertation has demonstrated nothing else, it has clearly shown that such "practices" are morally problematic in themselves, and that the complex frontiers of business practice constitute a Wild West of self-enrichment at the public's expense - which is exactly what the real "Wild West" was. Pace Wittgenstein, rule following should not be seen merely

²¹⁴ Insurance premiums also have tax advantages not available by structuring these transactions as loans.

²¹⁵ An account of the application of legal positivism to business contexts can be found in R.W.M. Dias, *Jurisprudence*, third edition (London: Butterworths, 1970), 381 – 405.

as an imitative social practice, any more than language games can be thought of without consideration of the logical frameworks that bring them into existence or that family resemblances among logical concepts can be considered without thought of the unseen “genetic” structures that make them meaningful. Pace Wittgenstein, metaphysics does not lead into an outer darkness but, at least where business practice is concerned, into the light of a deeply meaningful understanding of the moral preconditions and frameworks needed to make all trade and exchange just and righteous.

Conflicts of rationality cannot be seen without acknowledgment of the further metaphysical reality that divides moral rationality from prudential rationality and provides the vantage point from which this reality can be seen. (Metaphysicians are thus, in this sense, the unacknowledged legislators of the world.). The study of the foundations of banking law and the other framework/content dichotomies that mark the business landscape also require a similar leap of intelligence beyond the empirical domain that marks the territory of self-interest and self-advancement into the metaphysical necessities of laws, rules and deontological prohibitions that require an exercise of moral rationality. When the power and depth of double entry bookkeeping and the deeper significance of preventing insurance companies from insuring financial results are understood, it can be seen that what we discover in devising rules is not an ephemeral, makeshift ramshackle of contingencies, but a door opening into a complex domain of permanent structures and restrictions that in a sense has always been there, awaiting human empirical discoveries to make its reality manifest, its applications real and its connections to the empirical world binding. The necessities of Kant’s synthetic a priori propositions become increasingly apparent.

Rawls and the Constructivism of Kantian Ethics: The Road to the Good Will

Of all the efforts to minimize Kant's metaphysics and thus make his ethical theory more accessible to empirically oriented approaches, the most influential was provided by John Rawls in the early 1970's. It is worthwhile in this regard to examine Rawls' efforts to "detranscendentalize" Kant and weaken the metaphysical aspects of his philosophy, an effort that Rawls himself would have to significantly downscale by the time of the writing of *Political Liberalism*.²¹⁶ Rawls's attempts to bring Kant under the umbrella of moral constructivism generally worked to the benefit of game theorists, who believed that moral constructivism entirely exhausts the field of intelligible ethical theory.²¹⁷ Man's power of moral legislation thus comes under the broader power of coherent doxastic construction, the overall project of building belief systems that move from what Rawls describes as "narrow reflective equilibrium," (commonplace, "error free" judgments brought into a collective focus made possible by "public reasons" and "overlapping consensus") into a wider equilibrium facilitated through analysis and philosophical interaction with prevailing social and scientific views. Rawls resists a wider logical constructivism based on the nature of empirical facts, holding that it is in the very process of undertaking and formulating categorical imperatives that empirical inputs and

²¹⁶ Rawls conceded ground not only to Kant, but to utilitarians and communitarians as well. In his later works Rawls came to grips with more pragmatic issues of constitutional government and thus was deeply concerned that public institutions, both in their structure and interrelationships, be able to adjudicate conflicting claims among people with differing conceptions of the good. John Rawls, *Political Liberalism* (New York: Columbia University Press, 1993).

²¹⁷ Game theorists are certainly not shy about dismissing out of hand the kinds of metaphysical projects in ethics exemplified by this dissertation. Don Ross and Chatale LaCasse comment: "One sort of opponent who will be untouched by our arguments is the person who believes that there are non-constructed moral facts whose nature is independent of actual human preferences but which can, at least in principle, be discovered through inquiry or revelation.... While we are aware that many serious philosophers have defended non-constructivist realism, we find the metaphysical views on which it relies to be too bizarre to comment upon." Don Ross and Chantale LaCasse, "Morality's Last Chance," (340-375) in *Modeling Rationality, Morality, and Evolution*, *op cit.*, 341.

hypothetical imperatives are made morally relevant. Man, in effect, through the categorical imperative, creates his own values rather than discovering them.²¹⁸

In this regard Rawls finds a significant divide between the value realism of moral intuitionism and Kant's ethical theory. On this account, Rawls sets forth what he considers to be the three key traits of intuitionism, the first two of which, but not the third, are held in common with Kantianism. "First," argues Rawls, "the basic moral concepts of the right and the good, and the moral worth of persons, are not analyzable in terms of nonmoral concepts."²¹⁹ At the metaethical level, then, the fact/value and is/ought divides clearly separate ethical naturalism from Kant and the intuitionists. "Second, first principles of morals (whether one or many), when correctly stated, are true statements about what kinds of considerations are good reasons for applying one of the three basic moral concepts: that is, for asserting that something is (intrinsically) good, or that a certain institution is just or a certain action right, or that a certain trait of character or motive has moral worth."²²⁰ Next is the important but controversial maneuver of bringing Kant into the constructivist fold. "Third (and this is the distinctive thesis for our purposes), first principles, as statements about good reasons, are regarded as true or false in virtue of a moral order of values that is prior to and independent of our conceptions of persons and society, and of the public social role of moral doctrines."²²¹ Rawls argues that this intuitionist approach is rejected by Kant, thus bringing him firmly into the

²¹⁸ John Rawls, "Kantian Constructivism and Moral Theory: The Dewey Lectures 1980," (515 – 572) *Journal of Philosophy* 77 (1980).

²¹⁹ John Rawls, "Themes in Kant's Moral Philosophy," (497-528) in *Collected Papers*, ed. by Samuel Freeman, (Cambridge, Mass.: Harvard University Press, 1999), 510-511.

²²⁰ *Ibid.*, 511.

²²¹ *Ibid.*

constructivist camp.²²² From the point of view of this dissertation and the specific metaphysical thesis it advances, this claim must be challenged.²²³ On the basis of the metaphysical arguments being advanced on behalf of Kant, Rawls' third claim cannot be seen as a ground for dividing Kant from its ground in freedom and pure practical reason.

In his essay, "Kant's Moral Constructivism and his Conception of Legislation,"²²⁴ Patrick Paul Kain notes that Rawls does not sufficiently account for Kant's position on the authorship and legislation of moral law with respect to both the self and the holy will. Kant himself makes a clear distinction between the authorship of moral law itself and the authorship of the *obligation* that accords with such a law,²²⁵ thus drawing a distinction

²²² On the view taken in this dissertation, Kant cannot be a constructivist in Rawls' sense because Rawls' empiricism entails that private beliefs are capable of generating operative moral truths if subjected to "reflective equilibrium" and "considered judgments" that require no reference to external values if our beliefs are, for example, implicitly shaped through social traditions that are absorbed through culture. Rawls is correct in the sense that Kant's notion of autonomy cannot be preserved if external factors such as an independent table of values directly compel our conscious deliberations. But Kant's point is that all our values and all our beliefs are constantly and endlessly subjected to a structural rational critique that is internally generated and that what we gain from this is an internal visualization of states of affairs that both ought to hold as a matter of moral imperative and must hold of necessity to meet empirical requirements of modern civilization. The alignment of natural teleology with the kingdom of ends that Kant undertakes in the *Critique of Judgment* would thus clearly establish principles of sustainability as capable of generating an external table of values of the kind Rawls disputes. The exercise of precautionary principles with respect to global warming would have to require an internally generated recognition of duty (under motivational internalism) that could not depend upon the contingencies of preferences or a moral sense.

²²³ David Heyd points out that the metaphysics of freedom, morality and selfhood create considerable difficulties for Rawls' efforts to establish principles of justice on the basis of cooperation or psychological dispositions. Heyd notes that because of this empiricist stance, Rawls becomes trapped in a circular argument under which persons empowered with moral capacities are both the cause and the effect of a well ordered society. David Heyd, "How Kantian is Rawls's 'Kantian Constructivism'?" (196 – 212) in *Kant's Practical Philosophy Reconsidered: Papers Presented at the Seventh Jerusalem Philosophical Encounter, December 1986*, Yirmiyahu Yovel, ed. (Dordrecht: Kluwer Academic Publishers, 1989), 199. If principles of justice are to be derived from Rawls' "original position," an additional problem is created because Kant would not advocate placing any domain of knowledge under a "veil of ignorance," since the content of all knowledge and belief must always be under the purview of rational critique. (Even the social contract itself is always subject, on Kant's view, to rational critique as an a priori test of its viability under universal principles.) Thomas Pogge points out that because of this, Rawls' social contract could never exceed the political domain of a nation state and is thus incompatible with the realities of globalization. T. Pogge, "Rawls and Global Justice," (227 – 256) *Canadian Journal of Philosophy* vol 18, no. 2 (June 1988)

²²⁴ Patrick Paul Kain, "Kant's Moral Constructivism and his Conception of Legislation," Twentieth World Congress of Philosophy, Boston University, August 10-15, 1998. <http://www.bu.edu/wcp/MainTEth.htm>.

²²⁵ Allen Wood draws a similar distinction, one that he applies more forcefully than Kain in order to build a case for Kant as a moral realist, a case that will be explored in more depth in chapter five, since it supports the thesis of this dissertation. Wood also uses this distinction to attack the case for Kantian

between creation of positive law (which in turn generates values) and discovery of the law that proceeds from the divine will and the preexistent framework of values entailed. On Kain's view, Kant was highly sensitive to the prevailing views of Baumgarten, Wolff and others that the preeminence of divine commands and natural laws was tied to God's omnipotence and omniscience. But for Kant there could be no concession to any possibility that morality can be tied to human inclinations, no matter how indirectly. Divine influence could be exercised through both natural processes and moral law and this can be dangerous for morality, since any interaction between theoretical and practical reasoning tends to favour the former at the expense of the latter – hence the need to maintain a sharp division between the two. A fearful response to the threat of divine punishments is not, according to Kant a moral response. Thus the formalism of the categorical imperative does, on Kain's view, exclude divine command, even though the former does ultimately come into alignment with the latter. As Kain states, "Kant insisted that a categorical command must lie in the nature of things, i.e. neither in our inclination, nor in God's will, nor in a combination of the two."²²⁶

With respect to the metaphysical position being advanced in this dissertation on Kant's behalf, intuitionists and Kant do agree on the immediacy of moral truths, but what divides them is not the possibility of a preexistent order of values. Intuitionists claim that moral truth is grasped immediately and self-evidently without any supporting inferential process of moral reasons. The exercise of Kant's categorical imperative, on the other hand, directly engages the imperative itself as a synthetic a priori proposition that implies

constructivism and to build a case for this own theory of "separationism" (which will also be discussed in chapter five). Wood argues that moral law is objective and independent of human judgment and yet also constitutes an object of pure practical reason as exercised by the agent. Allen Wood, *Kantian Ethics*, *op cit.*, 106 – 122.

²²⁶ *Ibid.*, 4.

and requires the full metaphysics of transcendental arguments.²²⁷ One does not in principle break a promise because promise breaking cannot without contradiction be universalized as a moral law; the problem is that the conditions of possibility for all promise making would be undermined.²²⁸ In the second formulation of the categorical imperative such transcendental arguments stipulate a preexistent order of values whereby human beings can be considered to have intrinsic value, to be considered as “ends-in-themselves.” (The “kingdom of ends,” which is brought into consideration with the third formulation, requires an even more extensive, preexistent order of intrinsic values.)

Intuitionists and Kantians can thus share first principles of impartiality and sustainability

²²⁷ Peter Strawson famously argued in favour of a descriptive metaphysics based on transcendental arguments but excluding Kant’s transcendental idealism. For now, it needs to be made clear that the full strength of Kant’s metaphysics does include transcendental idealism, since this is crucial to the division between theoretical and practical reason being considered in this dissertation. This idealism, it is being argued, goes hand-in-hand with a realism of preexistent values. Kant scholars J.B. Schneewind and Christine Korsgaard side with Rawls’ depiction of Kant’s constructivism with respect to value creation. Onora O’Neill, on the other hand, sees an important distinction from Rawls in Kant’s separation of the moral from the political, i.e., in Kant’s focus on a universal community of moral agents rather than a political community of citizens. Onora O’Neill, “Constructivism in Rawls and Kant,” (347-367) in *The Cambridge Companion to Rawls*, *op cit.*, 362. There is also the possibility that Korsgaard, Rawls and Schneewind have established their interpretation of Kantian constructivism on the basis of a mistaken interpretation of Kant’s actual position. Kant clearly stipulated in the *Critique of Practical Reason* that the concepts of “good” and “evil” cannot exist prior to and independently of the principle of law established as a priori and independently of objects conceptualized as sense data. (For this reason the Transcendental Aesthetic has no application to practical reason; for theoretical reason knowledge of objects in the physical world is established prior to the development of principles of science. Under practical reason universal principles are first established under the categorical imperative and from there conceptual knowledge is established on the basis of the determination of practical reason as to states of affairs that ought to be the case because they must be the case.) But this is based on the understanding that it is the holy will that establishes moral law through the determination of its own will – and in the process thereby creates a preexistent order of intrinsic values. Thus the exercise of the categorical imperative by human wills would be undertaken for the purpose of determining or validating required duties based on a preexistent order of intrinsic values established by the holy will. This does not mean that the Rawlsian constructivist reading is wrong, but there would be a burden of proof for establishing that values worked out by human agents would be identical to those established by the holy will. (This distinction is thus entirely different from the distinction between authorship and legislation of moral law established by Kant. Kant argues that maxims universalized under the categorical imperative should accord with maxims exercised by the holy will, but there is clearly no facility in the categorical imperative for universalizing the establishment of intrinsic values along the same lines. Cf. *Critique of Practical Reason* [102, 185].)

²²⁸ The same process of transcendental argumentation can be extended to respond to the tiresome critiques of Kantian landlords housing Jewish refugees and forced to respond truthfully to Nazi interrogations. The Kantian should properly respond to such critiques by citing the fallacy of immediate consequence and claiming that the real moral issues rests with the conditions of possibility that brought the Nazis to power in the first place. The argument should thus be shifted into historical analysis and away from content.

as very powerful considerations under Rawls' second condition; however, the immediacy requirement with respect to intuitionist inferences will quickly become lost under the weight of complexity that drives the modern world and its multifarious environmental and legal applications of impartiality and sustainability. (The Kantian too must give up the demand for immediacy, but at a later stage, since his demand for immediacy applies to inferential conclusions, not to the entire syllogistic structure.²²⁹) A greater burden of moral work is actually ascribed to the Kantian agent, since he must fully grasp the logical structure of the moral reasons that support his categorical injunctions. But this deep understanding should also compel his will to be moral under an internal motivation driven by duty and thereby magnify his determination to comply with the obligations he generates for himself through self-legislation.

The other crucial difference between intuitionists and Kantians lies in the nature of the metaphysical commitments of the latter. Whereas intuitionists such as G.E. Moore could deny a metaphysical dimension for the non-naturalism of "good" and then proceed to establish an empirical test (the open question) for goodness that provides no distinction between theoretical and practical reason, Kantians look to the perfectly good will, not to empirical states of affairs, as the sole source of unconditional good. This is essential for the preservation of the divide between theoretical and practical reason, since in all cases of empirical practical reason, action merely corresponds – and thus is subordinate - to knowledge. A point of comparison can be made to Hegel's absolute spirit, which does in

²²⁹ An interesting analysis of the relationship of Kant and intuitionism is provided by Thomas Hurka, who criticizes the claims of Robert Audi that the categorical imperative can be used to provide an inferential justification of W.D. Ross' prima facie duties, which Ross believed were entirely self-evident and could not be subjected to any inferential justification. Audi relies upon the second formulation of the categorical imperative and claims that a content of duties could thereby be generated under normative ethics, but Hurka denies that the categorical imperative can yield any content in any of its formulations. Thomas Hurka, "On Audi's Marriage of Ross and Kant." <http://www.chass.utoronto.ca/~thurka/docs/audi.pdf>.

this sense work through and fulfill its purpose through man's empirical history and thus does point to an ultimate Borgesian library of complete metaphysical knowledge in which man – and especially technological man of the nineteenth and twentieth centuries – is invited to partake through the ceaseless questing after scientific knowledge. Kant, on the other hand, uses transcendental idealism to reject the possibility of any such scientific or metaphysical knowledge of things-in-themselves. Science gains its Newtonian certainty precisely because of its restriction to appearances; whatever can be learned about things-in-themselves – if at all possible and then only negatively - must be arrived at through pure practical reason, and even then only through the deductive, a priori knowledge of the frameworks in which such essences reside. As noted earlier, Kant gets himself into philosophical trouble by extending the extremity of these restrictions even to the concept of the self, such that all that can be understood of the deep, non-empirical content of one's own self is limited to the framework structures that constitute the transcendental dimensions of selfhood. But since, morally, we become aware of ourselves moving from one framework vantage to another as the "I think" accompanies all of our representations – and this is essentially what we do whenever we formulate categorical imperatives – what we gain from our exercises of pure practical reason is a complete understanding of deontological prohibitions re: actions that may facilitate our interests, proclivities or hypothetical imperatives of various sorts, but which must be ruled out universally and necessarily. Thus, this metaphysical foray into transcendental necessity opens us to an understanding of the synthetic a priori applications of universal principles of impartiality and sustainability. This understanding is, in turn, based on our a priori knowledge of a

preexistent order of intrinsic value that does constitute an external imposition, but yet is always subject to the overriding force of internally generated reason.

Thus, metaphysically, what we gain from the perfectly good will is never any positive knowledge or awareness of how such a spirit functions in its metaphysical domains, and this limitation is made ironclad through transcendental idealism. Pace Leibniz, Spinoza, Hegel, and rationalists and idealists of every description, man can never have theoretical knowledge of things-in-themselves; such wanton speculations provide the classic case of pure reason exceeding its proper boundaries and limitations. But while we are deprived of direct, substantive, positive metaphysical knowledge of what a perfectly good will would do, we can gain, noumenally, an a priori understanding of the frameworks in which such a will must operate and thus come to the understanding that moral law must be the result of the determinations of such a will, that such a will must, as a consequence of its own perfection, never be subject to descriptions in terms of its “duty” or “virtues.” In short, we are cut off from any knowledge that pertains to the omnipotence or omniscience of the perfectly good will; what we can glean is the element of perfect goodness – and this primarily in respect of deontological prohibitions. Only after a long, self-imposed process of metaphysical restrictions (and, concurrently, through political organization) can the autonomous agent work at positive acts of self-perfection through the development of virtues as detailed in Kant’s Doctrine of Virtues.²³⁰

Clearly Kant was (as Patrick Kain points out) aware of the difficulty of setting forth the distinction between a God or perfectly good spirit that functions fully and completely and without contradiction among his divine attributes of omniscience,

²³⁰ Kant’s doctrine of virtues is elaborated in the *Metaphysics of Morals* (1797), Mary J. Gregor, trans. (Cambridge: Cambridge University Press, 1996), 139 – 234. Kant’s theory of the good will is detailed in the opening section of the *Groundwork For the Metaphysics of Morals*, *op cit.*, [12 – 17], 9 – 13.

omnipotence and perfect benevolence on the one hand, and what man can reasonably take from this correct understanding of God on the other hand. Men could quite reasonably seek a perfect imitation of God by extending the development of all of their faculties equally into all domains of theoretical and practical reason, be they scientific, ethical or metaphysical. In this regard natural law theorists would have every justification in looking askance at Kant's project of dividing theoretical from practical reason, in seeing the individual agent as the font of a priori knowledge of ethics. For Kant, man must first become aware of his own duties and obligations solely through the power of reason, i.e., the power of pure practical reason, and from there realize that his exercise of reason ultimately corresponds to divine reason. Man certainly starts with empirical awareness of his own world and thus begins to build scientific knowledge even before he understands what science is. But what really matters on Kant's account is man's development as a moral being, and the exercise of the categorical imperative is, on this view, crucially important both for self-development as an agent acting in this world and as pursuing the right road to God.

For Kant, then, it was important not only to establish the good will as the locus of unconditional good but to clarify a "*summum bonum*" from the human perspective. Kant's entire moral program ends (in the *Metaphysics of Morals*) with the development and ongoing perfection of human virtues, a process that completed a lifelong progress of duty that starts at the beginning of the *Groundwork* with the identification of the good will as the source of unconditional good. But this relentless focus on moral perfection as the one divine attribute that must fully absorb the lifelong concentration of human beings was out of kilter with the Aquinean, natural law understanding of God (an understanding

Kant generally accepted) that emphasized all of God's perfections. Men could thus just as easily seek the emulation of the divine through theoretical reason as through practical reason and thus use material progress of the Enlightenment ideal as the only program required for fulfilling divine expectations. This was especially problematic, given that human beings could achieve considerable power or happiness by attempting the quest for omniscience and omnipotence. The considerable, self-sacrificing work that must be undertaken in this life to subordinate oneself to universal principles and to build the kingdom of ends in this world was clearly not automatically rewarded with happiness. Kant thus identifies an "antinomy" of practical reason in the failure of our human life to create a perfect coalescence of virtue and happiness into the greatest good, the "*summum bonum*." Our project of moral self perfection thus extends beyond this life into an afterlife in which we have a categorical obligation to invest our hope, given that we have no knowledge or empirical certainty of such an existence.

Kant tackles the anomaly of this antinomy directly:

Now Christian morality supplies this defect (of the second indispensable element [happiness] of the *summum bonum*) by representing the world, in which rational beings devote themselves with all their soul to the moral law, as a kingdom of God, in which nature and morality are brought into a harmony foreign to each itself, by a holy Author who makes the derived *summum bonum* possible. Holiness of life is prescribed to them as a rule even in this life, while the welfare proportioned to it, namely, bliss, is represented as attainable only in an eternity.²³¹

Christianity thus attempts to effect a "foreign harmony" between theoretical and practical reason, between the authority of natural law and the autonomy of the conscience, with the understanding that sacrifices to holiness in this life are rewarded in the next. Kant, on the other hand, argues that our moral objective on Earth is the achievement of the kingdom of ends, which in turn elevates our rationally obligated hopes for admission into the

²³¹ Immanuel Kant, *Critique of Practical Reason*, *op cit.*, [270], 225-226.

kingdom of God. Thus, in opposition to orthodox Christian dogma of all denominations, Kant argues for a continuity of both happiness and moral perfection in both this life and the next, a ceaseless and endless progress towards holiness that can never be fully achieved for the human soul in its progress through eternity.

Empirical and/or metaphysical knowledge is inextricably bound to morality in Christian doctrine as a means of binding the faithful to the authority of knowledge, be it vested in the Protestant, secular state or the hierarchy of the Catholic Church. This authority of knowledge carries with it the moral authority to make laws or rules, and the faithful thus accede to eternal life through obedience, the authorities through wisdom. But Kant succeeds in reversing this subordination of practical reason to theoretical reason by deducing that the soul's progress towards perfection lasts through eternity, and thus the individuated soul must take the responsibility of moral self-legislation, of executing categorical imperatives, of functioning as the basis and foundation of moral knowledge on which all political organizations must subsequently be built. This eternal subordination to self-imposed duty and obligation provides the condition of possibility for morality, and this is so because no concession to human inclinations can be permitted in this process: the divide between theoretical and practical reason must remain inviolate. Kant thus imagines what would happen if humans had access to substantive metaphysical knowledge:

... God and eternity in their awful majesty would stand unceasingly before our eyes.... Transgression of the law would be shunned, and the commanded would be performed. But because the disposition from which actions should be done cannot be instilled by any command, and because the spur to action would in this case be always present and external, reason would have no need to endeavor to gather its strength to resist the inclination by a vivid idea of the dignity of law. Thus most actions conforming to the law would be done from fear, few would be done from hope, none from duty. The moral worth of actions, on which alone the

worth of the person and even of the world depends in the eyes of supreme wisdom, would not exist at all.²³²

Kant then goes on to complete his case for the authority of autonomy over the authority of natural law, given that the pursuit of the *summum bonum* and of the knowledge of God continues well into the afterlife:

Nevertheless, the Christian principle of morality itself is not theological (so as to become heteronomy), but is autonomy of pure practical reason, since it does not make the knowledge of God and his will the foundation of these laws, but only of the attainment of the *summum bonum*, on condition of following these laws, and it does not even place the proper spring of obedience in the desired results, but solely in the conception of duty, as that of which the faithful observance alone constitutes the worthiness to obtain these happy consequences.²³³

Thus the pursuit of morality through pure practical reason (exercised in this lifetime) both precedes and leads to religion, at which point the autonomous agent discovers that the moral law, arrived at through the application of the categorical imperative and the exercise of pure practical reason, aligns perfectly with the divine will. In effect Kant's formalism arrives at a divine command theory through the back door:

In this manner the moral laws lead through the conception of the *summum bonum* as the object and final end of pure practical reason to religion, that is to the recognition of all duties as divine commands, not as sanctions, that is to say, arbitrary ordinances of a foreign will and contingent in themselves, but as essential laws of every free will in itself, which, nevertheless, must be regarded as commands of the Supreme Being, because it is only from a morally perfect (holy and good) and at the same time all-powerful will, and consequently only through harmony with this will, that we can hope to attain the *summum bonum* which the moral law makes it our duty to take as the object of our endeavors. Here again, then, all remains disinterested and founded merely on duty.²³⁴

Thus, Kant brings together the metaphysics of pure practical reason with that of the perfectly good will. The free will does not gain substantive metaphysical knowledge of

²³² Immanuel Kant, *Critique of Practical Reason*, trans. Lewis White Beck, Library of Liberal Arts, 1956, cited by Christine Korsgaard, 147.

²³³ Immanuel Kant, *Critique of Practical Reason*., trans. Thomas Kingsmill Abbott, *op cit.*, [270], 226.

²³⁴ *Ibid.*, [270-271], 226.

its own nature but of the framework of laws that are essential to its being and its ultimate progress towards self-perfection and knowledge of God that come to pass in the next life. We can gain no such knowledge in this life, only the apprehension, through pure practical reason, of the moral law that results from the determinations of such a perfect will.

The Good Will and the Metaphysics of Freedom

What is thus important in setting forth Kant's moral metaphysics is this initial operation of pure practical reason in exercising moral powers independently of religion, and yet arriving at the same moral laws determined by the perfectly good will. This reason functions freely through the exercise of the first formulation of the categorical imperative (it subjects hypothetical imperatives to a transcendental process of testing in order to realize universalizable maxims), but it also (on the position advanced in this dissertation) functions on the basis of its access to an a priori order of intrinsic values that yields first principles pertaining to sustainability, impartiality, and also to sovereignty. This is apparent from the second formulation of the categorical imperative, from which we are categorically bound to acknowledge the autonomy not only of ourselves as individuated rational agents, but the autonomy of others. From this we gain the a priori knowledge that man, who exists as a thing-in-itself – and through its autonomy as an "I-in-itself" – also functions as an end-in-himself. Every individual agent commands the power of his own freedom as well as the power of his own autonomy. From this comes the categorical obligation to "treat humanity, whether in my own self or in that of another, always as an end and never as a means only." This realization leads naturally to the third formulation: for all rational agents to legislate and to exercise pure practical

reason towards the ideal of creating a “kingdom of ends.” Thus the first formulation, which provides a logical and formal means of universalizing maxims, leads to the means of generating moral content in the second and third formulations. This process may in and of itself generate values, as Rawls argues, but it also clearly depends upon a pre-existing order of intrinsic values, including those centered on the a priori principles of sustainability and impartiality, as explained earlier.²³⁵

In addition to these two principles is that of sovereignty, specifically the moral sovereignty of the individuated agent, which arises with full metaphysical force in the third formulation. This force conveys the full authority to legislate under the a priori principle of autonomy, to exercise pure reason in the noumenal realm in order to arrive at moral laws entirely appropriate for a “kingdom of ends,” which under ideal conditions brings to its greatest possible perfection the social cohesion envisioned by Adam Smith, as well as the greatest possible contiguity of moral and natural realms as envisioned by Kant. As Frederick Copleston describes the kingdom of ends:

A rational being can belong to this kingdom in either of two ways. He belongs to it as a member when, although giving laws, he is also subject to them. He belongs to it as sovereign or supreme head (*Oberhaupt*) when, while legislating, he is not subject to the will of another. But it is also possible, and perhaps more likely, that *Oberhaupt* is to be taken as referring to God. For Kant goes on to say that a rational being can occupy the place of supreme head only if he is “a completely independent being without want and without limitation of power adequate to his will.”²³⁶

Copleston is right to hedge his interpretation, since it is possible that Kant believes that creating a contiguity of the moral and natural is an ideal and can truly be achieved only

²³⁵ Cf. page 29.

²³⁶ Frederick Copleston, *A History of Philosophy*, vol.vi., (New York: Doubleday, 1960, 1994), 331. Kant citation taken from *Groundwork*, trans. T.K. Abbott, [434], 52. Alternatively it can be argued that autonomy in the third formulation refers to all rational beings in the generic sense of rational (i.e., not subject to the contingencies of the human condition). The second formulation is thus clearly distinguished from the third through its focus on humanity (human condition) and from the first with its focus on logic.

by God. But Copleston, as a Jesuit, saw himself as fully compliant with the principles of Aquinas and thus may have been prone to the belief that creating the kingdom of God on Earth is equivalent to creating Kant's kingdom of ends. He thus brought Kant's metaphysical exercise of pure practical reason more quickly into alignment with the Christian faith and religion than Kant might himself have intended.²³⁷

This power of the individual agent to exercise his moral powers through the birthright of his own sovereign authority depends, in Kant's view, on the twin metaphysical forces of freedom and autonomy. The objective of this dissertation to revive a strongly metaphysical version of Kant's ethics depends crucially on the success of making freedom a viable metaphysical force. However, the issue of metaphysical freedom was certainly one of the most vexing issues Kant faced in the formulation of his moral philosophy. His position on the subject, as noted in the previous chapter, changed sharply between the *Groundwork* and each of the three Critiques.

The *Critique of Pure Reason* strongly established the case for both transcendental idealism and transcendental arguments, and from there, Kant was able to build his case for the pure categories of the understanding and the foundation for the capacity of reason to be able to formulate empirical knowledge. The last two sets of categories, relation and modality, constituted a remarkable achievement in establishing metaphysical frameworks for all knowledge acquisition through the principles of transcendental idealism. One of the key moves in this process was Kant's establishment of the analytic-synthetic

²³⁷ This emerges more clearly from Copleston's critique of transcendental idealism, which Copleston believes raises the problem of moral knowledge, which on fully consistent metaphysical account must yield moral truth only through positive knowledge derived from the noumenal realm. (Copleston, *op cit.*, 433). This complaint has already been addressed in this chapter with respect to the extent of rational critique of which man is capable. But Copleston uses this exercise of Aquinian metaphysics to raise the interesting point that the anomalies that emerge from Kant's philosophy of self limit him to a very weak account with respect to the problem of other minds, which for Copleston can be little more than a mental construction. (431). Cf. also Copleston's debate with Bertrand Russell: <http://www.bringyou.to/apologetics/p20.htm>.

distinction as a purely semantic and logically oriented division, in contradistinction from the modal-metaphysical “necessary-contingent” distinction and the epistemological “a priori-a posteriori” distinction. This in turn allowed Kant to develop synthetic a priori propositions to articulate the metaphysical function by which, for example, sense data or intuitions could be bound to the human understanding through the “third term” or binding forces designated by the pure categories of the understanding. Thus, the three types of “relations” categories, the categorical, hypothetical and disjunctive, could, respectively, designate binding forces of inherence, causality and reciprocity in setting forth the process by which sensations became bound to the understanding through the aegis of transcendental logic. (*Critique of Pure Reason*, A79/B104, passim) ²³⁸

This process, however, burdened theoretical reason with important restrictions and thus left the door open for the empowerment of practical reason. Pure reason was free to speculate on ideas of its own internal generation, thus opening the possibility of “antinomies” or fallacies of pure reason, one key antinomy for each of the four main sets of categories. The third one, the one affecting “relation” is the key one with respect to the metaphysical possibilities for freedom because of the distinction it opens between positive freedom (the power of the will to act under its own self legislation) and negative freedom (the power of the will to act causally without being impacted by external causes). An antinomy thus opens between an empirical denial of the possibility of freedom (the deterministic claim that all processes in the universe must occur exclusively under the purview of the laws of nature) and the rationalist assertion of the necessity of causation through freedom, without which phenomenal appearances would not be feasible or explainable. As noted earlier in the dissertation, the antinomy cannot be

²³⁸ The pure concepts are the subject of the “transcendental logic,” under the “analytic of concepts.”

resolved through theoretical reason; the possibility of a metaphysics of freedom is attainable only through pure practical reason.

Kant finishes the *Critique of Pure Reason* with an exhilarating description of the exercise of pure practical reason as “the ultimate end of the use of pure reason.” In the concluding chapter, “The Transcendental Doctrine of Method,” Kant informs us that the greatest power of pure reason does not reside in its false presumptions of expanding its capacities, but its self-generated efficacy for finding its limitations.²³⁹ “This faculty, accordingly, enounces laws, which are imperative or objective laws of freedom, and which tell us what ought to take place, thus distinguishing themselves from the laws of nature, which relate to that which does take place.”²⁴⁰ The limitations imposed by self-legislated laws are thus counterfactually enabling, since we can use the full power of transcendental logic to bring into existence that which we can determine ought to be brought into existence. “The idea of transcendental freedom ... requires that reason – in relation to its causal power of commencing a series of appearances – should be independent of all sensible determining causes; and thus it seems to be in opposition to the laws of nature.”²⁴¹ A tremendous moral responsibility thus ensues for what man chooses, through his moral logic, to bring in to existence, under the caveat that he must limit himself to what ought to be brought into existence. Kant then issues a highly prophetic warning that well anticipates the dangers of industrial revolutions, economic imperatives of growth, the twin assumptions of Enlightenment progress, and ambitious projects of human reason designed to go beyond the provision of human necessities:

²³⁹ A.W. Moore, “The Transcendental Doctrine of Method,” (310 – 326) in *The Cambridge Companion to Kant’s Critique of Pure Reason*, Paul Guyer, ed. (Cambridge: Cambridge University Press, 2010).

²⁴⁰ Immanuel Kant, *Critique of Pure Reason*, A802/B830.

²⁴¹ *Ibid.*

We have found, indeed, that, although we had proposed to build for ourselves a tower which should reach to heaven, the supply of materials sufficed merely for a habitation, which was spacious enough for all terrestrial purposes, and high enough to enable us to survey the level plain of experience, but that the bold undertaking designed necessarily failed for want of materials. . . . (A)s we have had sufficient warning not to venture blindly upon a design which may be found to transcend our natural powers, while, at the same time, we cannot give up the intention of erecting a secure abode, we must proportion our design to the material which is presented to us, and which is, at the same time, sufficient for all our wants.²⁴²

Thus, when it came time to spell out the metaphysical nature of freedom in the *Groundwork of the Metaphysics of Morals*, Kant was suitably ambitious, devising the transcendental argument (detailed earlier in the dissertation) that we could derive our practical freedom from a faculty of reason that in turn results from the (metaphysical) fact that humans exist both as things-in-themselves and as ends-in-themselves. Kant was duly criticized for violating one of the cardinal precepts of the *Critique of Pure Reason*, i.e. allowing his speculative reason to outrun itself, for he seems to be making substantive, ontological claims about the nature of human existence based on knowledge he is taking from the noumenal realm. According to the argument advanced in this dissertation, Kant might have defended his metaphysical position by arguing that he was only making deductive claims with respect to a metaphysical framework that logically had to exist (in much the same way as he asserted the existence of the categories), rather than a content oriented claim with respect to the constitution of ontological properties. In any case, Kant took the criticisms seriously, and by the time of the writing of the *Critique of Practical Reason* he had backed away from these stronger metaphysical claims, now arguing that we could assume our freedom as a “fact of reason.”

²⁴² *Ibid.*, A707/B735.

Thus began the series of Kant's "as if" arguments, the hypothetical assumptions that gain deductive cogency from the claim that these frameworks that are apparent from the intelligible world do have strong explanatory value. This provided a more satisfying (for his contemporaries) basis for two earlier metaphysical claims: the dual standpoint and the reciprocity of freedom and morality. In the dual standpoint we take our powers of pure reason as applicable to both the intelligible world (which allows us to advance noumenal claims relevant to practical reason) and the empirical world (the power of theoretical reason to make conclusive observations re: the nature and laws of the world of appearances). The reciprocity of freedom and morality strengthens the "as if" claims of both elements by pointing to the mutual interdependence of both these two concepts.

But Kant could not resist pursuing his metaphysical claims with respect to the nature of freedom, and by the time of writing the *Critique of Judgment* in 1793 he was, as noted earlier, pushing the envelope again. This time he wanted to make human freedom an almost palpable experience, something that could almost be sensed as part of one's own aesthetic experience. Unfortunately Kant's comprehension of a vast system of teleology in nature did not lead him to identify sustainability as crucial principle of intrinsic value. (Indeed, this would have been a highly unrealistic expectation for Kant's time.) Rather than seeing the totality of natural systems as an end-in-itself, Kant argued that nature itself pointed to human freedom as an end-in-itself. This assertion had two unfortunate consequences (or, more exactly, it fueled the predilections of Kant's contemporaries). First it fed the empiricist assumptions of the scientific pioneers of the industrial revolution that nature existed to serve human purposes.²⁴³ Second, it fired the

²⁴³ Ernst Cassirer points out that one of Kant's significant observations in the *Critique of Judgment* lies in his analysis of natural teleology, which refocused interest on the relationships between the laws of nature

aesthetics of Kant's philosophical successors (especially Schelling), who, ignoring Kant's earlier arguments on the subject, claimed that freedom was a key attribute of man's powers of artistic creation. (Kant subsequently became known as "the uncle, if not the father or the grandfather" of the nineteenth century Romanticist movement in Europe.)

This dissertation has offered a strong argument with regard to Kant's concept of metaphysical freedom because of the claims advanced that man must strongly exercise his powers to access the noumenal realm to identify and enforce effective metaphysical frameworks (e.g. banking principles of double entry bookkeeping). This entails the use of synthetic a priori propositions as a means of identifying the principles that apply to such systems, and thus provides the means for establishing the laws and rules needed to keep the Enlightenment assumptions under control, assumptions that would (if possible) facilitate an orderly development of both business and technological systems. Such synthetic a priori propositions are crucial to the exercise of moral rationality, which stands in contradistinction to the prudential rationality that is functional in the empirical domain, a rationality that has a high propensity for deteriorating into conflicted positions. Kant, however, was always convinced that moral and prudential rationality could always function harmoniously together, provided one never lost contact of the distinctions, derived through a priori reasoning, which kept them metaphysically separated.

Kant's metaphysics, it has been argued, is crucial to this enterprise, first for its hard separation of theoretical from practical reason; second, for its establishment of the priority of right over good; and third, for its individuation of the moral agent, i.e., the

and the laws of physics themselves, rather than on the mere relationships between natural events and phenomena, and thus foreshadowed a reorientation of interest in scientific theory that occurred in the nineteenth century and away from the mechanics that had characterized the eighteenth century. Cassirer sees in this a continuity from Kant's earlier work, the *Metaphysical Foundations of Natural Science*. Ernst Cassirer, *Kant's Life and Thought*, James Haden, trans. (New Haven: Yale University Press), 290 – 291.

establishment of this agent as the source of a priori moral knowledge. This metaphysical enterprise depends on the ability to establish the superiority of practical reason over theoretical reason, an enterprise, which, as Kant points out, is not possible empirically, since empirical practical reason must always take its direction from empirical knowledge. Practical reason must, on this view, function at an a priori level in order to claim the power of moral self-legislation that provides the grounds of its own supremacy over theoretical reason. The commentary of Kant scholar Lewis White Beck very clearly establishes this point:

If there is an unconditional practical law, it could be discovered only by a reason that is intrinsically practical, and not by a theoretical reason which is only extrinsically and contingently practical, i.e., one issuing laws which may or may not be applicable in practice, depending upon the desires and the situation. Such an intrinsically practical reason is called pure practical reason.... That pure reason can be practical is the chief thesis of the Kantian moral philosophy....²⁴⁴

If pure practical reason is intrinsically practical, it must also be intrinsically valuable as an end-in-itself through its exercises in establishing moral laws, duties and obligations for itself. If pure reason gains its true strength from its power of self-limitation rather than self-expansion, then it is for the reason that metaphysical freedom makes possible the exercise of pure practical reason, the power of transcendental logic to bind principles to the will. Significantly, Kant imposed no speculative limits on pure practical reason and gave it no antinomies, since it must have virtually unlimited power to formulate whatever laws it needs. Pure practical reason gains its power to work in the noumenal realm through a freedom of action to exercise transcendental logic that is far greater in the intelligible world than it is in the empirical world, where sensations are bound to the understanding in a more automatic and determinist way. Man's greatest

²⁴⁴ Lewis White Beck, *A Commentary on Kant's Critique of Practical Reason*, (Chicago: University of Chicago Press, 1960), 40-41.

creative power is to bring into existence that which he knows through pure practical reason ought to be brought into existence, and this requires man not to expand his range of actions but to limit them through the identification of deontological prohibitions. The power of imagination and counterfactual thinking that can produce great literature and great works of art functions best in its imposition of real world caveats, singling out the dangers and violations of rights that must be eliminated *tout court*, and setting these apart from contingencies that are best addressed through probability analysis. In pure practical reason is found man's best exercise of transcendental freedom through the power of the transcendental self, the facility of the "I think" to accompany all representations, moving from one framework perspective to another, identifying and categorizing various "natural kinds" distinctions, nomological forces and hierarchies of intrinsic value.²⁴⁵ Kant's vision of ethical rationalism allows the exercise of categorical imperatives for the purpose of self-legislation and the formulation of moral laws, thus putting us into alignment with the determinations of the perfectly good will.²⁴⁶ It entails an a priori objectivity and cognitivism in ethical knowledge that yields transcendental principles that are absolute, universal and necessary.

As noted, Kant's moral philosophy affords only a very difficult and ambiguous understanding of the self. The empirical self affords an understanding of the content of

²⁴⁵ Stephen Engstrom, "The *Triebfeder* of Pure Practical Reason," (90 - 118) in *Kant's Critique of Practical Reason*, Andrews Reath, Jens Timmermann eds (Cambridge: Cambridge University Press, 2010)

²⁴⁶ In addressing the problem of theodicy, Kant raises the fascinating point that reason is not merely under the caveat of its own limitations, but is also limited by its lack of awareness of the powers it may manifest in future: "Will it be possible in time to find better grounds of justification so that the supreme wisdom under attack will not simply be absolved on lack of evidence but will be positively vindicated? This question remains undecided, since we cannot demonstrate with certainty that reason is completely powerless when it comes to determining the relationship between this world, as we know it through experience, and the supreme wisdom. However, as long as the power of reason in these matters is not demonstrated either, all further attempts of "human wisdom" to fathom the ways of divine wisdom must be abandoned." Immanuel Kant, "On the Failure of All Attempted Philosophical Theodicies," (1791) Michel Despland, trans. in *Kant on History and Religion* (Montreal: McGill-Queen's University Press, 1973), 290.

one's identity in the phenomenal world, the wealth of factual data by which one can describe one's beliefs, desires, propositional attitudes and psychological states. But because of transcendental idealism, one cannot have Descartes' metaphysical certainty of the self as the content of a thinking thing. And because the transcendental self functions as a framework through which each individual works, it does not provide the grounds for metaphysically individuating such elements for each distinct self, thus opening the door for Kant's successors to argue on behalf of an absolute spirit through which the work of each individual agent is absorbed and universalized.

The one means by which the self could advance its claims for its own individuation is through the concept of autonomy. Autonomy identifies the metaphysical power of independence possessed by each agent to function as a sovereign power in his or her own right, a power to self-legislate and to impose the moral law upon one's own self. This power of autonomy can best be appreciated by comparison to its opposite, heteronomy. In an advanced economy, as our material connections to the world around us increase substantially, we raise the bar for the minimum standard of living we would find acceptable. As Juliet Schorr has noted, our entire lives become overwhelmed by our roles as producers and consumers - and to such an extent that it becomes vastly more difficult to fulfill the personal responsibilities for political activity that Hannah Arendt demands, or to achieve the standards of social, political and economic cohesion that Adam Smith would demand. Once our economic existence moves beyond the provisions of genuine necessities, we lose the time and capacities needed to live a truly autonomous existence in the manner Kant imagined. This dissertation has already advanced the claim that empirical theories of all stripes benefit from this increased heteronomy because it

becomes much easier for consequentialists, communitarians and holists to claim that human beings are irrevocably determined by forces outside of themselves and that true autonomy is impossible for moral agents. But this phenomenon is better understood as a factor of modern life, not an absolute, natural and self-evident condition of the self. The extreme difficulties of achieving genuine metaphysical autonomy in Kant's sense should not be understood as making such autonomy impossible. Men can never lose their innate capacity to self-legislate and to identify and act on intrinsic values.²⁴⁷

Once again, it must be noted that empiricists can respond to the problem of heteronomy by pointing to the overpowering utility gains that technology can make available to us. And clearly, given the magnitude and potential of applied sciences such as nanotechnology, it can even be claimed that the benefits could be so overwhelming that they would minimize all potential problems. We might find technological means to happiness and security that could be extended to everyone on the planet and provide strong material incentives for everyone to abandon their discord and acrimony. We might be able to buy sufficient time to work out viable solutions under the aegis of long

²⁴⁷ One fascinating potential solution to the failures of Enlightenment assumptions, conflicts of rationality, global resource depletion, etc. lies in the possibility of absolute heteronomy represented by virtual reality machines. This was actually proposed as a thought experiment by Robert Nozick in 1974, long before virtual reality became a possibility. Nozick imagines an "experience machine" through which we could program any desirable experience or automatically realize an ideal of character or achievement. Nozick himself argues against the use of such a machine because for him it is important to have truly genuine experiences and achieve genuine self-identity. Nozick's idea has had a long run and has been put through many permutations (Putnam's "brain-in-the-vat" and the Matrix films, among many others), but it is now moving out of the domain of thought experiment and into the range of technological possibility. From an economic standpoint, the idea may soon gain imperative force simply by virtue of restraining human beings from depleting global resources and efficiently achieving a maximized (if imaginary) lifestyle on the basis of minimal physical inputs, what would be in effect no more than necessary goods. In practice, this scenario would be politically impossible to achieve because of the problems of determining who would be plugged in and who would have the power of controlling the systems frameworks. How would those plugged in retain the power to change their programming or become unplugged altogether? Who would be allowed to procreate and breed the next generation of plugged-in citizens? The interesting dilemma lies in whether or not the ideals of the Enlightenment ultimately force this solution on us. (Nozick's thought experiment was taken from *Anarchy, State and Utopia* - New York: Basic Books, 1974.)

term prudential rationality. But again, the problems pertaining to the failure of Enlightenment assumptions would assert themselves with even more vigor, and the complexities introduced by any such new technologies might become even more impossible to manage. All the standard economic arguments that technological problems create business opportunities for technological solutions ring hollow because of the widening time gaps between problems and solutions required by the ingenuity gap. The more technologically powerful new solutions become, the more difficult, complex and expensive the solutions to all their externalities.

The terms of Kant's third antinomy are now altered in an important sense because the ability to "act into nature" as described by Hannah Arendt means that man can now exercise at least some freedom through causality that does engage theoretical knowledge. Man is now less determined by the laws of physics and nature, and may gain the power to alter or override some of them at least temporarily. But this now increases the necessity for new, highly technical categorical imperatives. Worse still, the benefits of any new technology may create a host of new hypothetical imperatives that are crucial and must be maintained at all costs, thus giving them the force of categorical imperatives.

Essentially, man has gradually, through technology, gained the power not only to build a vast network of artifactual frameworks on top of natural ones, but also the power to alter and manipulate natural ones as well. The permanent and self-contained teleology of natural systems, which Kant believed was to serve the cause of human freedom, is now put under increasing threat of the pressures generated by conflicts of rationality such that the long term sustainability of such systems becomes threatened. Over the course of the past two centuries, centuries circumscribed by the industrial revolution, man has

gradually aspired to some of the capacities ascribed by the German idealists to the “absolute spirit,” the power to act “as if” man were endowed with omniscience and omnipotence – or “as if” his technological development and endless progress would inevitably lead him to that ultimate state. Like the absolute spirit, technological man assumes responsibility for the direction of human history, and assumes that his power to change it overrides any need to be subordinated to its laws.

At this point, idealists, consequentialists and moral constructivists of all stripes can find common ground in their insistence that man can be the creator of his own values, regardless of the risks that this search for values creates. This is the danger of economic thinking that assumes that endless progress can result in the creation of new “values-in-use” that are equivalent to “values-in-exchange.” On the view taken in this dissertation, it requires the full strength of Kant’s metaphysics to generate the totality of deontological prohibitions needed to fully weed out the dangers of conflicts of rationality. (Not even Popper’s fallibilism or Kuhn’s anomalies are effective because, under the ingenuity gap, their testing processes may not be applied in time.²⁴⁸) Moreover, tying Kantian metaphysics to deontological prohibitions through the categorical imperative demands, pace Rawls, a prior order of intrinsic values that can be referenced to first principles such as impartiality, sustainability and sovereignty.

This bias against metaphysics even picks up intuitionists in its net. Since judgments of right actions required, in his view, empirical tests of goodness, G.E. Moore placed an extraordinary burden of proof on Kantians to establish the efficacy of duty. Moore insisted that no act could be considered a duty unless every possible consequence

²⁴⁸ Cf. Steve Fuller, *Kuhn vs. Popper: The Struggle for the Soul of Science* (Cambridge: Icon Books, Ltd., 2006).

of the act could be staked out “throughout an infinite future,” along with every other possible alternative to such acts. The metaphysics involved in undertaking a priori deontological prohibitions would thus have been inconceivable for Moore, who insisted that “we never have any reason to suppose that an action is our duty.”²⁴⁹ Thus, on this empiricist orientation, an agent has to confine himself to calculations of which acts “will cause more good to exist in the Universe than any possible alternative.”²⁵⁰ Clearly, this approach is wrong if we take seriously Arendt’s arguments with respect to “acting into nature.” Under the precautionary principle it could be argued that the burden of proof should rest with consequentialists to prove that every possible alternative has been worked out with respect to the introduction of new technologies.

The efforts of Moore, economists, consequentialists and ethical constructivists to discover the source of intrinsic value outside of metaphysics seems to be doomed because of the assumption that right does not precede good and that all accounts of value must be tied to human interests or dependent upon good states of affairs. In this regard, John Dewey and R.B. Perry were probably more correct in claiming that all values are essentially instrumental. On the position taken in this dissertation, all efforts to establish intrinsic value outside of metaphysics will inevitably lead to conflicts of rationality.

This brings the detailed discussion of Kant’s metaphysics and its application to his moral philosophy to a close. This case for a strong reading of Kant’s metaphysics is

²⁴⁹ G.E. Moore, *Principia Ethica*, (Cambridge: Cambridge University Press, 1903), 149. Moore’s criticisms were also in part based on his much stronger objections to Kant’s account of theoretical reason as based upon transcendental idealism. On Moore’s account, founded on metaphysical realism, all concepts were mind-independent. If concepts were mind independent, then judgments were too. This leads directly to Moore’s intuitionism in ethics. By contrast, Kant’s pure concepts of the understanding led to his view that judgments served a regulatory function for theoretical reason by subordinating and assimilating concepts to law. This could be seen then as providing appropriate links to hypothetical imperatives, whereby an agent can project goals based on laws and regularities determined by judgments. Robert Hanna, *Kant and the Foundations of Analytic Philosophy* (Oxford: Clarendon Press, 2001), 54 – 66.

²⁵⁰ *Ibid.*, 148.

based on the necessity to establish the importance of synthetic a priori propositions as a means of identifying, implementing and modifying needed business frameworks that are necessary for moral rationality and thus hold out the possibility that conflicts of rationality can be brought under some measure of control. Kai Nielsen has boldly claimed that “the case for metaphysics, or at least a transcendental metaphysics (if that is not a redundancy), stands or falls with the case for the synthetic a priori.” Nielsen concludes that the argument fails; this dissertation will conclude that it succeeds.²⁵¹

²⁵¹ Kai Nielsen, *On Transforming Philosophy: A Metaphilosophical Inquiry*, *op cit.*, 10.

CHAPTER 5: DEVELOPING THE KANTIAN MODEL

Introduction

In the previous chapter, the importance of developing a metaphysical approach to Kantian ethics was developed along several fronts: the noumenal dimension of the self as agent, the authority that pure practical reason should exercise over theoretical reason, the role of synthetic a priori propositions and transcendental arguments. These metaphysical dimensions need to be developed to support the role that Kantian ethics must play with respect to an enhanced understanding of a world in which technological advances are creating increasing opportunities for human beings to alter the structural frameworks of nature and of markets. It was particularly noted that Rawls and constructivist theories have subjected Kantian theory to an excessively empiricist interpretation that has not been helpful in understanding these newly discovered capacities for acting into markets and acting into nature. Chapter five must now take up the task of developing a Kantian model of ethical analysis and decision making based on this metaphysical approach. It will be shown that important regulatory doctrines necessary for addressing problems of technological advances, e.g., the precautionary principle, are supported by a Kantian ethics based on a metaphysical approach, whereas Kantian constructivists such as Onora O'Neill are led to reject the precautionary principle.²⁵² Consequentialist approaches are equally incapable of supporting these regulatory doctrines, although they retain a singular importance in the analysis of states of affairs. It will be argued that the Kantian model being developed in this chapter provides the best method for addressing the contexts of

²⁵² Onora O'Neill, *Autonomy and Trust in Bioethics* (Cambridge: Cambridge University Press, 2002), 162 – 164. Her rejection of the precautionary principle is based upon an underlying assumption that the kinds of extreme risks created by genetically modified foods (which she specifically mentions), climate change or financial crises are not serious enough to create the type of uncertainties that would inhibit the possibilities of rational action by specific agents. All lifestyles create externalities that must in her view be manageable.

uncertainty and the Hobson-choice dilemmas created by man's powers to generate systemic risks in the domains of both nature and finance.²⁵³

The Kantian model to be developed will have three central characteristics. First, it will emphasize the role of pure practical reason in governing the domain of empirical rationality, especially with respect to the standard understanding of motivational internalism used in empirical models. Of particular importance is Kant's ethical rationalism as an alternative to the instrumental rationality also commonly associated with empirical models. The standard Humean model for ethical decision making and for interrelating beliefs, desires, goals and motives for action provides a striking contrast to the Kantian model in this regard.²⁵⁴

Second, the Kantian model places significant emphasis on historical development both for individual agents and for specific societies as they evolve into nation states and into complex civilizations. The Kantian model can be used to generate a substantive content of moral judgments utilizing the categorical imperative (in spite of extensive and longstanding criticism that the formalism of the categorical imperative generates no content whatsoever), but is far better adapted to a priori historical analyses that can be conscripted into Kant's long term project for the realization of the kingdom of ends. As such, the Kantian model is better adapted to the analysis of moral dilemmas or contexts of uncertainty than would be the case with a standard model oriented towards generating substantive content held to be valid under a given set of circumstances. Thus the locus of

²⁵³ Allen Wood, "Kantian Ethics," (Cambridge: Cambridge University Press, 2008). Wood's "separationist" thesis of Kantian ethics and political philosophy will be the basis of this approach.

²⁵⁴ Motivational internalism is here defined as a necessary connection between the condition of being bound by a moral obligation (or the agent's belief that such an obligation is binding) and the reasons or motivation that compel the agent to honour that obligation. From the fact/value dichotomy established by Hume and his belief that morality is basically practical, it would follow on a positivist or empiricist account that no motivation is internal to the recognition of facts. By contrast, epistemic deontology holds that such motivation does in fact exist; i.e., epistemic justification depends on prior commitments to true beliefs.

moral authority and sovereignty is the individual moral agent, who because of the role of pure practical reason actively shapes civil society far more than he is shaped by society.

Third, the Kantian model makes a clear distinction between the evolution of a given state and that of the civil society to which it's attached. For Kant the meaning of history is to be determined through an a priori analysis of the intellectual forces that shape the moral development of a given civil society in its progress towards the perfection of laws. This is entirely distinct from the development of the state, which is empirically manifested through the coercive enforcement of laws and the engagement of warfare, which in turn constitute the pattern of real empirical events through which historical chronologies are built. The Kantian model can thus rationally assent to a primitive, Hobbesian state as the first stage of historical development that leads over time to the creation of open societies and republican states more conducive to the perfection of laws and more amenable to technological progress.²⁵⁵

It will be argued that this Kantian model is well suited (in fact better suited than its rivals) to analyze the specific occurrences of acting into nature and markets outlined earlier in this dissertation because it does not make assumptions of institutional stability or the ensured sustainability of natural systems or market structures. It better facilitates a sound understanding of moral dilemmas that occur when, for example, we are compelled to privilege economic imperatives of growth in the face of the global credit crisis, while at the same time being required to limit those same imperatives because of equally compelling arguments to control greenhouse gas emissions or to conserve non-renewable resources like oil or natural gas. It also provides a better method for dealing with contexts of uncertainty, ingenuity gap situations of the kind addressed earlier in this

²⁵⁵ On this third dimension of the Kantian model, global justice issues would be paramount.

dissertation, when we are faced with dilemmas of identifying known unknowns or unknown unknowns and engaging the precautionary principle on this basis.²⁵⁶

Constructing the Kantian model in this way (based on a metaphysical interpretation of Kant's ethical theory) will also, it will be argued, help to refute longstanding criticisms of Kant's ethical theory, i.e., alleged conflicts of moral imperatives (hiding innocent refugees in your house and protecting them from their persecutors) and the moral luck problem (i.e., the morality of agents depends upon contingent circumstances). In both cases the criticisms are addressed by establishing an historical context apart from any content of substantive moral judgments.

Kant himself specifically constructed much of this model over and above the establishment of its theoretical basis, especially with respect to the historical elements noted in the second point. Kant's own work must be seen as limited to the first stage of Arendt's three stages of technological development, i.e., straightforward appropriation of natural forces. This is clear because Kant's writings date from the onset of the industrial revolution, the point in time when technological progress was moving into the second stage: i.e., the magnification of natural forces through the use of scientific theory. What will now be set forth is an updating of the Kantian model in order to address the stage three problems of acting into nature and into markets. In this regard, the final section of

²⁵⁶ Support for this thesis is provided by George Soros in his diagnosis of market failures in the wake of the 2008 crisis. Soros claims that the market stability achieved between the 1930's and 1970's is the result of careful supervision and oversight by financial authorities that was abandoned in the 1980's with the adoption of free market ideologies and the explosive growth of both globalization and financial derivatives. In Soros's view, markets are naturally unstable and do not naturally tend toward equilibrium, but are instead governed by much more complex dynamics. The global economy is thus not only vulnerable to first order crises such as housing bubbles, but also higher order crises involving currencies (particularly the U.S. dollar) and credit accommodation that can extend over longer terms and thus are difficult to diagnose. However, the results become manifest in systemic weaknesses and greater instances of moral hazard (e.g. "too big to fail" financial institutions). George Soros, *The Soros Lectures at the Central European University* (New York: Public Affairs, 2010) 38 - 47. See also George Soros, *The Crash of 2008 and What it Means* (New York: Public Affairs, 2009), 83 - 107.

this chapter will address the applications of the Kantian model, specifically the global credit crisis and the ongoing deterioration of natural systems caused by greenhouse gas emissions. In both cases, certain forms of acting into markets/nature are being considered as solutions, even though these will almost certainly raise the specter of new and probably more dangerous contexts of uncertainty.

The Construction of the Kantian Model – The Dimension of Pure Practical Reason

Chapters three and four established the central importance of pure practical reason in the development of a metaphysical interpretation of Kant's ethical theory. Kant himself had placed pure practical reason beyond the purview of any critique, arguing that it is not subject to illusion, as is the case with theoretical reason, thereby asserting its mandate for judging states of affairs that ought to be the case and for determining what knowledge reason is capable of in its practical applications.

This constitutes a case for moral realism and motivational internalism, a case based on Kant's theory of transcendental idealism as set forth in the *Critique of Pure Reason*. Theoretical knowledge is forged through the confluence of sensibility and understanding which in turn facilitates the objectivity of the world of appearances through the synthetic a priori principles attendant upon the pure concepts of the understanding. "Causality" and "synthesis" are thus part of the a priori structure of reasoning that we ourselves bring to bear on our empirical understanding of the world of appearances. But such knowledge is insufficient because we will inevitably seek to unify our theoretical knowledge beyond the bounds of empirical verification and thus fall into

“illusion.”²⁵⁷ However, what is denied to theoretical reason is granted to pure practical reason in building networks of complete and comprehensive ideas that extend beyond the bounds of empirical verification (what Kant terms the “unconditioned”). Theoretical reason is denied the power of metaphysical speculation in determining states of affairs that are the case, but pure practical reason may, though the categorical imperative, construct maxims and universal principles that can determine states of affairs that ought to be the case. Whereas theoretical reason is concerned with causality with respect to the laws of nature, pure practical reason is concerned with causality with respect to freedom, and this in turn necessitates the primacy of principles and transcendental logic in the application of pure concepts, facilitating judgments of goodness, justice and duties that on the one hand determine the nature of the will while at the same time affording a self-reflexivity of reasoning (and especially moral reasoning) itself; reason reflecting upon its own processes of reasoning.²⁵⁸ As noted in chapters three and four, this engages Kant in difficulties with respect to the nature of the noumenal self, the self that needs to engage the concept of self as a thing-in-itself, yet is prohibited from doing so by the strictures of transcendental idealism.

At the level of metaethics, these tenets constitute a theory of ethical rationalism. On Kant’s view, pure practical reason generates its own “objects,” i.e. principles, ethical concepts that are fully valid a priori and are applicable from natural circumstances and events, from which they are entirely separate. Kant’s version of ethical rationalism is particularly powerful because of the capacity of pure practical reason to function on its

²⁵⁷ *Critique of Pure Reason* (A292/B348) Reason necessarily forms the ideas of concepts such as “God,” “substance” etc. but then mistakenly asserts the reality of the entities to which these ideas correspond.

²⁵⁸ As a result of this “logic of illusion,” reason must make use of concepts such as “God” and “soul” in formulating a totality of knowledge while clearly recognizing that the concepts in question cannot be known. Reason in this sense is “regulative” rather than “constitutive” with respect to knowledge.

own (with respect to moral or political philosophy) or in combination with theoretical reason (in the analysis of history or religion). In combination, we are categorically compelled to have faith in God and the immortality of the soul, as well as to believe in the possibility of perpetual peace or the perfection of laws over time.

Ethical rationalism thus holds that we can create moral goals and objectives independently of our desires and passions, and so stands in opposition to instrumentalist theories of practical reason, which subordinate reason to the ends of desires and form the basis of most models of ethical decision making.²⁵⁹ On Kant's view, reason can largely determine or control our passions, which should not have any morally motivating force. As noted in chapter three, ethical rationalism is congruent with a view of autonomy that directly privileges the individual moral agent as the source of pure practical reason and part of the collective force of moral agents that determines the nature of civil society. By contrast, instrumentalism assumes that market forces (e.g. the "invisible hand") and civil institutions function more or less reliably, automatically and sustainably, and therefore unify and exert a strong influence over the desires and preferences of individual agents.

Models of ethical decision making are not restricted to aligning or contrasting themselves to instrumentalism, but also typically advance a theory with respect to the relationship between instrumentalism and internalism about motives and reasons. On the standard view, our psychological states divide between beliefs and desires, the former

²⁵⁹ An essential theme of the *Critique of Practical Reason* is the necessity to establish a metaphysical basis for ethics in pure practical reason itself, and thus entirely independent of any religious or metaphysical doctrines or beliefs. Ethical rationalism thus holds that moral principles are established a priori and hold of necessity, with the result that moral concepts are entirely independent of (but applicable to) phenomena in the empirical world. Pure practical reason thus gains the power to establish necessary relations between such principles and between the principles and states of affairs in the real world, such that reason (i.e. pure practical reason) functions *intelligibly* (noumenally) to identify states of affairs that ought to be the case and/or must be the case in order to establish conditions of possibility that must hold in order to facilitate the perfection of virtues or the achievement of values that would occur with respect to agents functioning in the empirical world. *Critique of Practical Reason*, Chapter III ("On the Incentives of Pure Practical Reason")

telling us the way the world is and the latter impelling us to transform the world into the way it ought to be. On the standard view, which can be traced back to Hume, beliefs can not have any motivational import, and so morality is entirely practical, restricted to our sense of what ought to be done, with our reasons for action conscripted strictly to the objectives set by desires. A relation of necessity thus holds between the recognition of our duty or commitment to action and the motivation to perform the action. In Hume's view there can be no objective reasons for action that motivate agents independently of their desires. Hume thus defended the gap between facts and values and the logical division between "is" and "ought." Internalism thus entails an analytic relationship between the concepts that link the logical stages of moral decision making.²⁶⁰

However, ethical rationalism in the strong metaphysical sense that has been attributed to Kant breaks out of this rigid division between beliefs and desires. On this account it is not our desires but pure practical reason that constructs states of affairs that ought to be the case – and this is because pure practical reason has the authority to exceed the limitations of theoretical reason in unifying our networks of beliefs. We not only have beliefs about the way the world is, but also how it ought to be, and it is these latter that can be seen to have motivational force. Kant thus becomes an externalist with

²⁶⁰ Motivational internalism thus manifests itself in two entirely different ways in Kantian (rationalist) and Humean (anti-rationalist) accounts. The emotivist/Humean account holds that an agent cannot have feelings or commitments that vary from beliefs related to the moral obligation in question. For this reason emotivist accounts are vulnerable to criticisms based on false beliefs with respect to particular concepts. For example, Thrasymachus's account of justice in Plato's *Republic* has been cited as a case damaging to emotivism because it is based on common people holding false beliefs with respect to the nature of justice itself and so people are wrongly motivated to subordinate themselves to those in positions of power because their authority is purportedly based on justice. (Philippa Foot, "Moral Beliefs" *Proceedings of the Aristotelian Society* vol. 59 (1958-1959), 420 – 425; Nicholas Sturgeon, "What Difference Does it Make if Moral Realism is True?" *Southern Journal of Philosophy* vol. 24 (1986), 126 – 127.) On Kant's account, by contrast, moral obligations must be established on the basis of true beliefs, and so the rational recognition of such beliefs establishes the motivation and bindingness of the obligations in question. But on the "separationist" account of Kant's political philosophy that constitutes the third dimension of the Kantian model being developed in this dissertation, Kant does recognize "external" reasons for action with regard to states of affairs that must hold objectively. Kant can thus be described as a moral realist.

respect to reasons; objective circumstances with respect to conditions in the world must have motivational force, but motivation itself must remain internal to the recognition of duty that is established according to the universal principles established under the aegis of the categorical imperative. Kant thus retains Hume's rigid division between practical and theoretical reason, but pace Hume he links them together through synthetic a priori propositions. As noted earlier, this unison of theoretical and practical reason becomes especially powerful when directed towards Kant's projects of hope: the summum bonum and the perfection of laws over time. The union of motivational internalism with ethical rationalism establishes a focus on states of affairs that ought to be the case (under ethical rationalism) that also must be the case (given the necessary conceptual relationships established under motivational internalism).

This Kantian model based on ethical rationalism is thus strikingly different – perhaps even alien – from the standard view, and even from Kantian models based on constructivist formulations. The Kantian scholar Christine Korsgaard, a student of Rawls and a strict constructivist, argues that the task of moral philosophy is to determine “the reasons we can share,” with respect to “what we owe to each other,” and this has, she claims, become distorted by the consequentialist preoccupation “to bring something about,” i.e. states of affairs.²⁶¹ The possibility that, given the nature of the global crises we now face, what we owe to each other must be defined in terms of states of affairs is one that Korsgaard adamantly rejects.²⁶² An ethical model such as this which reduces our

²⁶¹ Christine Korsgaard, *Creating the Kingdom of Ends* (Cambridge: Cambridge University Press, 1996), 275

²⁶² “According to the consequentialist conception of ethics, ethics is the most sublime form of technical engineering, the one that tells us how to bring about The Good. The questions that it answers are questions about what we should do with the world. These are the questions we must face when we confront issues of population control or the preservation of the environment, issues with which utilitarians have been non-

recognition of what we owe to each other to our desires and feelings is not likely to reach any consensus in which “the reasons we share” can resolve the serious financial, resource or environmental problems the world now faces. There must be clear links between what we owe to each other and the necessity of bringing something about (i.e. solutions) that must in the end be based on pure practical reason and its recognition of states of affairs that must be the case. This, then, is the basis for Kant’s moral realism.²⁶³

In his own analysis of the relationship between instrumentalism and internalism, Robert Myers acknowledges that anti-instrumentalists could legitimately argue that desires have their origin in deliberations based on beliefs that are not based on antecedent desires.²⁶⁴ In Myers’s view these arguments would have to take account of the fact that agents must already have a pre-disposition to act based on antecedent desire. But Kant’s argument is that pure practical reason is not limited to deliberations about desire per se. On Kant’s account reason is capable of a multi-faceted intentionality, such that we can reason about deliberations about desire, or reason about the capacity of pure practical reason to analyze and categorize such deliberations, or reason about the nature of pure practical reason itself.

Most striking, perhaps, is the way that Kant’s ethical rationalism has been overlooked as a potential model for ethical decisions, given the history of moral

accidentally obsessed. But ontological restrictions predate these global issues, and were already recognized at a time when all we had to do with the world was live in it together.” *Ibid.*, 300.

²⁶³ Kant’s form of moral realism thus aligns with modern versions. On Michael Smith’s view, ethical rationalism must be accompanied by a “practicality requirement,” whereby failure to be motivated by what is rationally required in a moral sense constitutes an example of practical irrationality (e.g. weakness of will). Motivations thus require justification by reasons. Michael Smith, *The Moral Problem* (Oxford: Blackwell, 1994), 61 – 62. Kant’s version differs because it can make use of externalism (the deterioration created by global warming creates external reasons for action based on the facts of theoretical science, which are a subject of *recht*, and thus “separate” (in Kant’s political theory) from issues that pertain to ethics. Some versions of moral realism do utilize motivational externalism. Cf. David O. Brink, *Moral Realism and the Foundations of Ethics* (Cambridge: Cambridge University Press, 1989).

²⁶⁴ Robert Myers, *Self-Governance & Cooperation* (Oxford: Oxford University Press, 1999), 97-98.

philosophy over the past fifty years. Analytic philosophers of the 1950's drew a clear distinction between the metaethical domain, where moral issues had cognitive import, and normative ethics, where they could not. The 1960's and 1970's brought to the fore serious first-order moral problems with respect to social issues, environment, etc. that had global impacts, and so could no longer be ignored. The focus of moral theory changed radically towards substantive concerns, with metaethics considerably marginalized or else merged with normative ethics. However, the possibility of a Kantian model in which the separation between metaethics and normative ethics could be preserved (via ethical rationalism) and in which the former could have a bearing on the latter through synthetic a priori propositions (thus preserving a fully cognitive and related status for issues in both normative ethics and metaethics) was never considered.²⁶⁵

To a certain degree the uniqueness of the Kantian model is based on Kant's rigid separation between theoretical and practical reason, given that virtually all of the alternative positions are united in the Aristotelian/Thomistic belief that the two forms of reason are highly coextensive. Where the two forms of reason are coextensive, theoretical reason is the typically dominant form, with normative rationality understood as secondary or derivative with respect to descriptive rationality. On this view morality is generally tied closely to social practices, which in turn exercise a strong influence over individual agents. By contrast, Kant makes the individual the autonomous and independent source

²⁶⁵ A parallel can be drawn between trends in philosophy of science (that were based upon a reaction against Kant) and those in ethics. The analytic tradition pursued a number of critiques of Kant's position based on the rejection of transcendental idealism and the synthetic a priori. (Hans Reichenbach, *The Rise of Scientific Philosophy* (Berkeley: University of California Press, 1968), 58 – 68). Rudolf Carnap accepted the analytic-synthetic distinction, but used this as a basis for classifying meaningful concepts as either logical or empirical, with the rest being rejected as entailing pseudo-questions. Quine then sought to undermine the analytic-synthetic distinction by arguing that all issues, whether logical or empirical, were largely to be decided on pragmatic grounds of simplicity, predictive utility, etc. These developments tended to reduce the significance of metaethics and increase the importance of substantively normative ethics based on reflective equilibrium. Quine, Rawls, Putnam and Davidson were the leading exponents.

of morality, and by extension the originator of social practices and beliefs. Given the domination of theoretical over practical reason that characterizes these alternative positions, they have a significant dependence upon reliable institutions and sustainable market structures to ensure that desire-based inclinations are directed at socially beneficial ends. On the Kantian account, such institutions, market frameworks and social practices are equally open to critique, and the substantive content of first order ethical analysis must be understood in the context of institutional and social development, using analysis from both normative and metaethical perspectives.

The Kantian model is thus highly dynamic and enlists a strong historical dimension utilizing a priori principles. This historical dimension constitutes the focus of the second segment of the Kantian model, which will now be examined in more detail.

The Construction of the Kantian Model – The Dimension of History

Kant himself did much of the work of constructing his own model, for what he envisaged in his essay “Toward Perpetual Peace: A Philosophical Sketch” was the foundation for a peaceful world based on an organization of republican governments (not unlike the United Nations or the League of Nations). While Kant ambiguously rejected the idea of a one world government, he did argue that nation states could continue to evolve in that direction. However, this evolution would be eclipsed by the development of a universal civil society, a cosmopolitan vision under which the world’s citizens could continue both their private projects for the perfection of virtues, as well as their collective enterprise for the perfection of laws on a global basis.²⁶⁶ Under this rubric, a system of

²⁶⁶ What Kant achieved was a singular advance over the Hobbesian worldview, which was entirely based on the priority of attaining peace and stability within individual nation states, with such states co-existing in

formal and informal organizations could evolve whereby problems like global warming, resource depletion or financial instability could be anticipated and corrected well in advance of their emergence, although clearly such problems would have been unimaginable in Kant's time.²⁶⁷

When some of Kant's other essays on history (particularly "Idea for a Universal History from a Cosmopolitan Perspective," "Conjectural Beginning of Human History," "The Concept of the Faculties," and "Anthropology from a Pragmatic Point of View") are considered, a much more complex picture of his model emerges. Kant had a teleological vision of human progress which had two principal directions, one corresponding with theoretical reason, the other with practical reason. In his vision of "fate," humans are destined by nature to perfect their overall rational capabilities over the course of history. This is defined largely in terms of man's increasing inventiveness and growing technical control of the circumstances of his existence. Under the vision of "providence," moral

a continuous state of nature. By contrast, Kant creates a tripartite division between the right of a state (the right of each nation to establish its own constitutional order), the right of nations (to establish peaceful relations between themselves using organizations and institutions similar to the modern United Nations) and cosmopolitan right. (Kant, *Metaphysics of Morals – Rechtslehre* 6:311) What Kant had in mind was a "world citizen law" (*Weltbürger-recht*) that entails a requirement for "universal hospitality." As nations continued their colonial expansion around the world, they would come to understand the limits of the "earth's surface" and thus the limits of global wealth that would have to be shared among all of the world's peoples. As Howard Williams puts it: "... there is no justification in one nation or group of nations assuming that they have a superior right to exploit the world's natural resources." (Howard Williams, *Kant's Political Philosophy* (Oxford: Basil Blackwell, 1983), 260.) Kant himself was incensed by the barbarous exploitation of slaves on sugar plantations in Jamaica and elsewhere (the wealth of which would become the source for the initial investments in the industrial revolution).

²⁶⁷ Kant's prescience with respect to the stewardship of global resources could not have extended to the specifics of modern problems, and indeed he was optimistic that over the long term moral rationality would come to dominate human affairs. But this would depend upon a successful transition from the right of state to the right of nations to cosmopolitan right. Thus, in contrast to Hobbes, Kant anticipated the dependence of peace and stability on cosmopolitan right (working in conjunction with the other two), rather than merely upon the right of state, as is the case with Hobbes. As Howard Williams notes: "Hobbes puts domestic political order first and regards international political order as of secondary significance. Kant wholly reverses this order of priority and puts the international order as the central concern of his political philosophy." (Howard Williams, *Kant's Critique of Hobbes* (Cardiff: University of Wales Press, 2003), 230.) Kant himself stressed the metaphysical basis of cosmopolitan right: "But the rule for this [cosmopolitan] constitution, as a norm for others, cannot be derived from the experience of those who have heretofore found it most to their advantage [as would be the case in Hobbes] ... it certainly requires a metaphysics." (Kant, *Metaphysics of Morals, Rechtslehre* 6:355.)

reasoning gradually takes ascendancy over theoretical reason, and men rather than nature are seen to be in greater control of human destiny.²⁶⁸ It is at this point where men initiate systematic programs for perfecting laws and developing statecraft towards the objective of perpetual peace.

This dualistic vision then maps on to Kant's thesis for the independent evolution of nation states and civil societies. Kant's social contract theory entirely rejects the notion of a commonwealth based on voluntary bargaining under which individual agents are free to enter or leave the state at their discretion. In Kant's view we are categorically compelled to enter the commonwealth because though the a priori principles of freedom, equality and material independence we gain an "external freedom" which safeguards our internal freedom to exercise pure practical reason, to formulate categorical imperatives and to perfect our virtues. External freedom thus manifests itself empirically in the world of experience and recorded as historical events. It is thus an empirical institutionalization of laws and principles which have their true domain in the noumenal world.²⁶⁹

The evolution of states thus follows a different trajectory from that of civil societies. In Kant's view it is perfectly acceptable for a state to be harsh and tyrannical towards foreigners or against some of its own citizens, even though the civil society of such a state may espouse civilized principles, since the state's principal mandate is to ensure national security and to maintain justice through the legitimate use of force and

²⁶⁸ Immanuel Kant, *Toward Perpetual Peace* 8.361 - 363. This is part of the larger and consistent theme throughout Kant's philosophy of nature providing the conditions necessary for development of freedom.

²⁶⁹ Kant's social contract thus differs radically from those of Hobbes and Locke, under which legitimacy of law and its coercive enforcement is based on the implied consent of citizens in voluntarily leaving the state of nature in order to gain the security of the civil state. That security enables citizens to freely exercise their rights to acquire and use property as they see fit, subject to justifiable legal constraints. But in Kant there is no such implied consent. We are categorically compelled by the force of an overwhelming moral imperative to exit the state of nature because of the overriding necessity to secure the means of sustenance that will make moral autonomy (which can't be realized under external threats or constraints) possible.

coercion.²⁷⁰ Kant has no objection to a Hobbesian state as the first stage of national development, since the destiny of such a state is the perfection of its laws and its ultimate transformation into a republican form of government. Kant even imagines “a nation of devils,” whose citizens are deeply inclined to choose evil maxims, but still recognize the need of the state to preserve civil order.²⁷¹

Kant, however, is optimistic that the moral strength of a civil society based on the autonomy of individual citizens who recognize the priority of pure practical reason will ultimately prevail. In perfecting their society, such citizens ultimately direct their attention to the civilization of the state through its gradual conversion to a republican form of government. At this point “providence” takes over from “fate,” and men are gradually seen to be in greater control of their collective moral destiny as they progress towards a global union of states and a universal and cosmopolitan civil society.²⁷² As noted earlier in the dissertation, the potential threat comes from the chance that a civilization would press its enlightenment too far in the direction of material and scientific progress and

²⁷⁰ Economists acknowledge exactly these sorts of injunctions between civil society and state, as in their analysis of prohibition, wherein a state seeks to enforce injunctions against social practices that have wide acceptance. Treating drug addiction as an illness rather than a crime is another example. When the focus shifts from the national to the international domain, Kant’s injunction for “universal hospitality” is one that has to develop over time and becomes manifest in civil society movements such as abolitionism in the mid-nineteenth century, women’s suffrage in the early twentieth century, civil rights in the mid-twentieth.

²⁷¹ “As hard as it may sound, the problem of organizing a nation is solvable even for a nation of devils (if only they possess understanding).” Immanuel Kant *Toward Perpetual Peace: A Philosophical Sketch* (1795) Ted Humphrey, trans.. *op cit.* (366), 124. Since there is a categorical obligation to exit the state of nature and join the civil state, Kant must make allowances for the possibility that those who adhere to this injunction may be agents who follow evil maxims. For Kant, “this kind of problem must be solvable” and is solvable because in Kant’s view the private vices of individuals will cancel each other out in the collectivity of the state, a claim similar to the contemporary adage that private vices generate public goods. For Kant it is the civil (religious) society that works to generate moral virtues; the role of the state follows a Hobbesian trajectory: “For it [the problem of organizing the civil state] does not require the moral improvement of man; it requires only that we know how to apply the attitudes present in a people in such a way that they must compel one another to submit to coercive laws and thus enter into a state of peace, where laws have power.” *Ibid.* As stability and order are required within the nation to secure basic necessities, peaceful relations are required between nations, which in turn facilitates a global civil society.

²⁷² Katrin Flikschuh, “Reason and Nature: Kant’s Teleological Argument in *Perpetual Peace*,” (383 – 396) in *A Companion to Kant*, Graham Bird, ed. (Oxford: Blackwell, 2006).

become preoccupied with increasing state power. As noted, this was a danger recognized both by Kant and by Rousseau.

Kant's project for the perfection of laws and the realization of perpetual peace thus requires historical analysis, one focused both on the progress of states (through theoretical reason) and the progress of civil societies themselves (through pure practical reason). Historical research is thus, for Kant, a project of hope, and combines the uses of both theoretical and practical reason in a way that gives the latter full authority over the former.²⁷³ Such analysis must thus accompany all substantive moral analysis because of the importance of establishing context. Do certain moral issues occur because of the intellectual history of a given civil society or because of the state of development of its principles of jurisprudence? Clearly, for Kant, any and all moral issues require ethical rationalism and require that reason be capable of setting moral objectives for the individual, state and civil society that are not impinged upon in any way by desires, passions or by the proclivity of a given state for warfare. Institutions and structural frameworks become equally subject to moral analysis whenever necessary. The belief

²⁷³ With respect to theoretical reason, there are a priori principles of historical development involving linear or circular development of historical trends, and most particularly stages of economic development; i.e., agricultural, industrial, etc. As Allen Wood notes: "For Kant himself, the very existence of civil constitutions themselves is historically contingent upon the emergence of an agricultural way of life, the growth of urban centers, and the productive surplus made possible by these socioeconomic forms." (Allen Wood, *Kant*, (Oxford: Blackwell Publishing Ltd., 2005), 121.) From the side of pure practical reason and moral rationality, progress is measured by the perfection of laws over time. Progress can be determined to the extent that peaceful relations between nations can be seen as permanent and "intelligible" (determined noumenally through pure practical reason), rather than merely provisional (and therefore empirical and power oriented in nature, governed by considerations of "balance of power," etc.) Kant's three conditions of permanent peace are the establishment of a republican constitution, the rights of nations established through a federation of states and cosmopolitan right, as noted earlier. Kant also has a number of conditions related to provisional establishment of peace that are interesting: the gradual disbanding of standing armies, the prohibition of nation states from assuming a national debt with respect to its external affairs, etc. These have fascinating parallels in their non-fulfillment in the world of today (the establishment of a military-industrial complex, the assumption of national debt for purposes of trade as well as military armament). Kant's optimistic vision has obviously not been realized, but the Kantian model does provide opportunities for analysis.

that we can determine a content of substantive moral judgments based on the instrumentalist belief that institutions are reliable and sustainable is alien to the Kantian model and to Kant's ethical theory.

Kant's philosophy of history represented the first major attempt to incorporate an Enlightenment ideal of perpetual human progress, in contrast to the view proposed by Vico earlier in the eighteenth century, under which historical progress is realized through recurrent cycles closely tied to the myths, metaphors and language use of the civilization in question. Kant's position would, of course, be eclipsed by Hegel's and Comte's in the nineteenth century under which history would be analyzed primarily from the perspective of theoretical reason. This period was marked by the entrenchment of utilitarianism and positivism as the prevailing intellectual mindset, as the material wealth made possible by the Industrial Revolution seemed to preclude the need for a dominant moral rationality as advocated by Kant. Western civilization transitioned into Arendt's second stage of technological development, under which the continued mastery of scientific theory made possible an increased magnification of natural forces, first through the steam engine and later through the internal combustion engine. It was now possible to break free of the prosperity trap outlined by Thomas Malthus, under which all the material gains made possible by technical innovations had been absorbed by increases in population.²⁷⁴

²⁷⁴ Kant's philosophy does anticipate Malthus's theory of population in certain respects because of the emphasis of Kant's social contract on securing goods and materials necessary for the sustenance of life. Kant's philosophy of history is based upon human populations spreading around the earth, driven apart by warfare, famines, etc. until rational men recognize the ultimate limits of human expansion, and it is this that generates the cosmopolitanism of a global civil society that works towards the achievement of perfection of laws and the securing of world peace over time. Allen Wood notes that a parallel can be drawn between the securing of "intelligible" (rather than provisional) property rights within a state and the securing of perpetual peace between states, which is also based on intelligible, rather than provisional conditions. (Allen Wood, *Kant, op cit.*, 21, 119.) In Malthus population growth is limited by empirical determinations of food supplies that impose strict material conditions based upon famine and arable land. In Kant, men

Kant clearly admired the agricultural innovations of his own day, but his thinking was clearly aligned with Arendt's first stage, as indeed was also the case with Jefferson, Paine, Adam Smith and Kant's other contemporaries, who believed that the rights of man could be effectively established on the basis of agricultural economies and the types of morally engaged civil societies these communities were capable of building. Inventions such as the seed drill, the improvements in yield through crop rotation, the development of canals, etc., resulted in the more efficient use of agricultural resources, and so left men with more leisure to debate and consider political issues, and thereby facilitate the improvement of laws over time. But Kant could not have imagined Arendt's second stage, in which material gains accumulate so rapidly that the prosperity they make possible becomes valuable for its own sake. Kant's own virtue theory, with its emphasis on perfect and imperfect virtues, on narrow and broad obligations, was clearly designed with the objective of improving civil society, and thus with maintaining the dominance of pure practical reason over theoretical reason. His emphasis was more clearly focused on pure science rather than its practical applications.

The Kantian model which Kant himself started now needs to be updated to cover Arendt's second and third states, which will be done after a consideration of the third element of the Kantian model, the separation between Kant's ethical theory and his theory of right. But the stress Kant placed upon historical analysis – and concomitantly upon the structural analysis of markets and political institutions - is fully appropriate for these later stages, given the inherent weaknesses in these systems noted earlier (e.g., the ingenuity gap). Kant's concern is not so much with historical events as they occurred,

exercise rational control over the material circumstances of their existence through the metaphysical exercise of pure practical reason, which mandates the security of necessary goods through world peace.

which are subject to analysis through theoretical reason, but with events as they should have occurred, and this requires the a priori application of universal principles through pure practical reason.²⁷⁵ It can then be shown why the Kantian model is better suited than its more empirically oriented rivals to analyze contexts of uncertainty and intractable moral dilemmas, as well as determining appropriate conditions under which the precautionary principle can be invoked. Although nature does, in Kant's view, direct man towards the development of his rational nature over long periods of evolutionary development, nature and society do come into conflict – a belief held in common by Kant and Rousseau and denied by empiricist thinkers dating back to John Locke. Such conflict does require a stronger authority to be granted to pure practical reason over theoretical reason.

The Construction of the Kantian Model – The Separation of State and Civil Society

The strict distinctions Kant draws between state and civil society are based upon the rigid divide between external and internal freedom i.e., between the experiential manifestation of freedom in the political state and the metaphysical freedom of the will that Kant ties closely to the possibility of morality and of pure practical reason. What has become more controversial over the past decade among Kant scholars is the extent to which this separation maps on to the distinction between Kant's concept of "*recht*," (roughly, the general concept of right that forms the basis of human rights recognized by the state) and the rest of his ethical theory.²⁷⁶ The distinction, as noted earlier, has

²⁷⁵ Allen Wood, "Kant's History of Ethics," <http://www.historyofethics.org/062005/062005Wood.shtml>

²⁷⁶ Kantian constructivists argue that *recht* can be fully derived from the categorical imperative; the non-constructivists deny this and offer instead a "separation thesis," whereby the doctrine of right, which provides the basis of Kant's political philosophy, functions entirely independently of Kantian ethics. The

become important in Kantian theory because of the great emphasis placed upon the concept of autonomy. Fully individuated rational agents must, under the concept of ethical rationalism, be fully free to formulate universal moral principles under the categorical imperative, and thus the conditions under which they can be made subject to coercion under the laws and regulations of a constituted state must be carefully circumscribed.

For this reason, much of the “Doctrine of Right” section of the *Metaphysics of Morals* is taken up with the question of defining external freedom and setting forth the conditions under which it can be realized in a political state.²⁷⁷ The state has a general mandate to secure and safeguard basic entitlements for its citizens, which in turn make the a priori concepts of freedom, equality and independence possible; however, the state is strictly prohibited from any sort of policies that are in any way perfectionist or paternalistic.²⁷⁸ As noted earlier, Kant’s objective is thus the development of a fully

dispute has important implications. The constructivists hold that all state activity is characterized by the possibility of coercive action, whereas civil society may evidence both coercive and non-coercive activity. The separationists, on the other hand, hold that civil society must, as a matter of moral imperative, be entirely free of coercive activity, whereas the state itself may contain elements of both coercive and non-coercive behavior. The separation thesis was first fully advanced by Allen Wood in “The Final Form of Kant’s Practical Philosophy,” (1-20) in *Kant’s Metaphysics of Morals*. Nelson Potter and Mark Timmons, eds. *The Southern Journal of Philosophy*, vol. xxxvi, supplement (papers delivered at the 1997 Spindel Conference). The debate has been vigorously pursued by both sides over the past decade.

²⁷⁷ Immanuel Kant, *Metaphysics of Morals*, 6:311 – 6:313.

²⁷⁸ In Kant’s view external freedom is the freedom of action in the political and social domain that is fully compatible with the freedom of action of all other citizens subject to a universal law. This external freedom is thus very different than the idea of constrained maximization found in the contract theories of Gauthier, Hobbes or Locke. Rather than a full freedom of action that individuals would possess with respect to property (subject to a limited set of laws or deontological prohibitions), Kant argues that all uses of property must be lawlike and must ensure the provision of basic necessities for all citizens. Private property is preserved subject to a process whereby acts of private acquisition “place all others under an obligation” with respect to the acknowledgment in principle of acts of acquisition, although Kant intends this obligation to extend to the collective use of property, such that there is an ultimate coordination of use among all citizens that could, in a modern interpretation, be interpreted as securing a form of sustainable development. The state functions, in Kant’s terms, as “the supreme proprietor,” and thus there is a fully reciprocal relationship between state and property that differs significantly from that in the theories of Locke (where the state is subordinate to the institutions of property) and Hobbes (where property is subordinated to the state). Kant, *Metaphysics of Morals, Rechtslehre* 6:323

rational civil society that in a sense “outperforms” the state in terms of moral evolution, given that the central objective of all citizens of all states is the realization of a global and cosmopolitan civil society that in turn provides moral leadership to all the world states as they work toward the perfection of law and the achievement of republican forms of government.

In short, the state is primarily responsible for national security both internally and with respect to its foreign relations. Kant understands the concept of “coercion” to be derived analytically from that of “*recht*” in a way that precludes (under the separationist interpretation) any direct application of the categorical imperative. The deliberations of free, autonomous agents in a civil society must be entirely free of any hint of force or coercive threats. As citizens undertake open discussions of the ways they can improve their society or perfect their laws and their virtues, they must be entirely motivated by duty and the intention to exercise ethical rationalism and pure practical reason. In such deliberations there must be no threats or intimations of reprisals (although expressions of moral disapproval would be fully acceptable). Compliance with the law, on the other hand, may be motivated by anything, most especially the fear of punishment.²⁷⁹

²⁷⁹ This is an issue that since the late 1990’s has divided Kant scholarship into two distinct movements: separationism and derivationism. The latter represents the established Rawlsian approach based on a constructivist reading of Kant’s moral and political philosophy. On this view, held by Onora O’Neil, Paul Guyer, Thomas Hill and others, the concept of *recht* (the concept of right as applied to external freedom) is derived from the categorical imperative, and thus all acts of state should align *recht* and ethics. All laws or prohibitions referenced by the concept of *recht* must be strictly characterized by some element of coercion. For derivationists Kant’s *Groundwork to the Metaphysics of Morals* is far more important than his later ethical writings, which are more involved with practical anthropology. On their view the categorical imperative is fully compatible with or subordinate to a constructivist approach to moral autonomy. The opposing movement, separationism, was spearheaded by Allen Wood in the late 1990’s and is based on separating *recht* from ethics in a way that preserves the independent importance of each. Nation states thus do not have to pursue policies subject to ethical constraints (although they cannot compel citizens to violate the categorical imperative) and thus can act with greater flexibility to attend to the interests of citizens. On this view acts of state may not be characterized by coercion, but may include broad obligations to (for example) invoke the precautionary principle or mandate acts of scientific investigation (which in and of themselves cannot be subject to coercion). What matters is that all (ethical) relationships between citizens

Kant clearly wishes to prevent citizens from associating the exercise of the state's mandate for coercive enforcement of the law with the entrenchment of private power that could ultimately threaten the lofty, multi-generational projects for perpetual peace and the perfection of laws that Kant had established for civil society. This, then, represents the political implementation of Kant's rejection of the Enlightenment ideal of maximizing the achievements of theoretical reason, on the grounds that it could lead to the corruption of a rational society. As Rousseau and Kant both foresaw, Enlightened societies could become preoccupied with the maximization of social power, with morality becoming understood entirely in social terms, a form of *sittlichkeit* (in Hegel's terms) that would become subordinated to the larger priorities of power. The state might eventually dictate social ideals to civil society through a state religion (an objective Rousseau actually supported) or could exercise an undue influence over social practices. Kant was determined to use his political philosophy to keep civil society fully in control of the machinery of the state, and his theory of property was the key to this enterprise.²⁸⁰

in civil society are free of all possible forms of (subtle) coercion and influence. Separationism thus takes a strict view of autonomy as being entirely free of all external force and influence. On this view Kant's later writings on political philosophy and practical anthropology have equal status with the earlier work in moral philosophy. Allen Wood elaborated the basic tenets of separationism in "The Final Form of Kant's Practical Philosophy," (1 – 20) in *Spindel Conference 1997: Kant's Metaphysics of Morals*, Nelson Potter and Mark Timmons, eds. *The Southern Journal of Philosophy*, vol. xxxvi, Supplement, (1998).

²⁸⁰ The key for Kant was striking a balance between the coordinated exercise of private property by individual citizens and the role of the state in exercising oversight over this process. An analogy might be found in the example of driving cars on a freeway. Each driver exercises a responsibility for the safe use of her own property (the car) relative to what other drivers are doing on the highway. Behind this process stands the state, which licenses drivers, legislates rules of the road, etc. Katrin Flikschuh has described this process as striking a balance between natural law and the general will. There are thus objective states of affairs that must hold, as in the case of natural law, but rather than being determined by authorities or experts, they are subject to ideal determinations of the general will. Such determinations preserve Kantian autonomy of the individual agent (which is the basis of the ideal of collective determination). (Katrin Flikschuh, *Kant and Modern Political Philosophy* (Cambridge: Cambridge University Press, 2000), 144 – 155. Cf. also Katrin Flikschuh, "Kant's Indemonstrable Postulate of Right: A Response to Paul Guyer," (1 – 39) *Kantian Review* vol. 12, no. 1.) An account of agent autonomy based upon the objectivity of moral law: Allen Wood, *Kantian Ethics* (Cambridge: Cambridge University Press, 2008), 106 – 122.

The Kantian theory of property can best be understood in contrast to its empiricist counterparts, especially that of Locke. For Locke the acquisition of property is entirely straightforward and can be understood entirely through a purely empirical account. Men living in the state of nature, according to Locke, are very naturally inclined to perform continual acts of initial acquisition in procuring food. In picking fruit off the trees, men naturally gain full ownership of the food that they eat through the labour they expend to acquire it. It then stands to reason that at some point men will voluntarily choose to enter a commonwealth under the mandate of the state to protect whatever property they acquire through their own labour. Since men around the world are equally blessed by the natural material abundances of nature, they can always choose to rescind their own citizenship if they are ever dissatisfied with the actions of government, and then may choose to live in a different state, or in the fashion of Robinson Crusoe, choose life on a desert island.

It is clear that Kant could not accept any such account in which moral or political action is deemed to have an empirical foundation or validation. For Kant the security and protections of external freedom are based on intrinsic rights that we all share by the very fact of being human, but property rights are not intrinsic but acquired rights – and the transition from the first to the second is not, in Kant’s view, straightforward or non-problematic as would seem to be the case for a man satisfying his hunger by picking fruit off a tree. Initial acquisition or acts of physical possession can create the concept of property, but Kant had the foresight to realize that something more was needed, i.e., that property had to have what he called an “intelligible” dimension, based on some noumenal or metaphysical understanding of the nature of property itself. Empirical possession of itself would provisionally validate coercive acts of seizure, whether authorized by a state

or not. Moreover, there would clearly be circumstances under which property must, under the threat of coercion, be sequestered out of private ownership into public ownership in order to serve some overriding social purpose, as under our modern concept of eminent domain.²⁸¹

What then validates the transition from external freedom to property rights and thereby authorizes the distinction between “mine and thine,” is the implied assent of civil society in approving some act of initial acquisition or sale/transfer of property. But this act of assent can in no way be understood empirically and cannot be understood through the acts of civil courts in settling property disputes, as such acts are part of the coercive apparatus of the state, which in Kant’s view is fully separated from the functions of a civil society. Every private act related to property must be seen as serving the ultimate objective of achieving the kingdom of ends or of perfecting the law in the long term or, in modern terms, contributing to the sustainability of the environment. Civil society obviously does not make specific rulings in individual cases, but each of these cases must be seen to reflect an implied judgment and implied assent of the “general will” (Kant explicitly uses Rousseau’s term) that clearly must be based on the exercise of pure practical reason. In Kant’s view the foundation of the authority of the state itself is the mandate provided by a “non-instrumental practical reason” that must be exercised by

²⁸¹ Kant rejects Locke’s view that property can be acquired directly through acts of labour that provide the justification for the acquisition. Rather Kant argues in favour of original possession in common through which private acts of acquisition can achieve justification. Cf. Katrin Flikschuh, *Kant and Modern Political Philosophy*, *op cit.*, 157 – 163. Flikschuh raises an interesting point against Leslie Mulholland with respect to the nature of physical needs that the Kantian state must satisfy. Mulholland’s position is based upon a claim that “political obligations supervene as rational requirements on determinate facts of human nature.” (163) Kant argues that an a priori determination of pure practical reason establishes the necessity of compulsory citizenship in the civil state to secure necessary goods (to achieve the “self-sufficiency” requirement), but there is no a priori determination of what actually constitutes necessities. Since Kant completely rejects paternalism, such specific determinations cannot be made by the state. Leslie A. Mulholland, *Kant’s System of Rights* (New York: Columbia University Press, 1990), 111.

civil society, and thus cannot originate in a constitution or any other document of state, as the constitution itself can only serve as the test of how well these a priori principles have been applied.²⁸²

Thus, as noted earlier, all members of a given community in a state of nature are placed under a categorical obligation to enter the commonwealth in order to fulfill their duties to exercise pure practical reason as a fully participating member of a civil society. Kant does not merely think that refusal to enter civil society is simply irrational, but he goes so far as to say that it would be “wrong in the highest degree” [unrecht ... im höchsten Grad]” (6:308). For Kant, the decision to leave the state of nature and enter into the civil state cannot be voluntary in the sense that one can rationally – i.e., by the standards of ethical rationality – exercise any right to refuse; neither can the decision be based in any way on some bargaining session under which agents determine whether it is in their self interest to leave the state of nature and enter the state. Once they are a part of a civil society with a fully operational state apparatus capable of exercising coercive judgments, they are required categorically to exercise pure practical reasoning in the formulation of a general will that, whether implied or not, must serve as the foundation for all specific determinations of the state. Contrary to Locke, Kant does not make the state the direct guarantor of property rights – nor, contrary to Hobbes, does Kant subordinate property to the will of the state. What Kant envisages instead is a fully reciprocal relationship between state and property that clearly must be adjudicated by an active civil society, one fully committed to long term objectives of perpetual peace and the perfection of law, as well as to a social organization of property that services these

²⁸² Robert B. Pippin, “The Kantian State,” (416-446) in *The Cambridge Companion to Kant and Modern Philosophy*, Paul Guyer, ed. (Cambridge: Cambridge University Press, 2006), 417.

ends. Thus, on Kant's account, it is absolutely critical that the functions of state and civil society be completely separated. Kant cannot tolerate the possibility of individual citizens thinking, in the manner of Locke, that the state exists to protect their property without any consideration given to how private property ownership in some particular domain services the long term ethical objectives of that society that pure practical reason compels them to serve. Kant cannot tolerate the possibility that citizens might think that the long term interests of their society are served through the aegis of the state and its coercive power servicing their own self interests.²⁸³

However, it can also be seen how Kant's argument, framed in this way under a "separationist" interpretation, repudiates any possibility of Kantian constructivism of the type advocated by John Rawls. As citizens have now been placed under a categorical compulsion to exercise pure practical reason to the maximum possible degree (or are implied to have done so), they will require their full powers of moral reasoning, which in turn will tax the full degree of their theoretical knowledge. Thus, under this interpretation of Kant, there is no possibility that principles of justice can be identified under a veil of ignorance, nor any possibility that external values have no bearing on political ones. Under the Kantian model being proposed, moral and political domains are deliberately separated by an effort of pure practical reason exactly for the reason that men are fully aware of both their interests and the interests of others, such that maxims must explicitly be adopted to prohibit the exercise of self-interest in the domain of politics. Political principles thus cannot possibly emerge on the basis of an overlapping consensus; nor can principles and practice be balanced through wide reflective equilibrium.

²⁸³ Kant in short, would not tolerate the response of Italian Prime Minister Silvio Berlusconi to conflict of interest charges levied against him: "If I, taking care of everyone's interests, also take care of my own, you can't talk about a conflict of interest." (Quote cited BBC: <http://news.bbc.co.uk/2/hi/europe/3041288.stm>)

The Kantian model also provides a striking contrast to the ideal state established by Plato in the *Republic*. Plato and Kant are both deeply concerned with the corrupting influence of wealth and self-interest in the forging of political decisions, but Plato argues that the domains of philosophy and politics can be bridged, so long as the philosopher kings are appropriately educated and there are clear demarcations between the roles of the various groups of workers and professionals. Kant, on the other hand, insists on a clear separation of duties between the two domains:

One cannot expect that kings philosophize or that philosophers become kings. Nor is this desirable, for holding power unavoidably corrupts the free judgment of reason. Yet both kings and king-like peoples (those which rule over themselves in accordance with laws of equality) should not allow the class of philosophers to diminish or fall silent, but rather should have them speak publicly, for this enlightens the business of government, and, because by its very nature it is incapable of forming mobs and clubs, this class is beyond suspicion of being mere propagandists.²⁸⁴

This notion of philosophers or academics as “propagandists” needs to be held in mind because, regrettably, that is exactly the danger that will be incurred and what the updated Kantian model must be used to detect as it is put into action under Arendt’s second stage. Under the first stage, the one Kant wrote under, philosophers and academics are indeed “beyond suspicion,” in large part because of the role Kant envisages them performing in the field of education. Unlike Plato, Kant does not envisage a specialized education for philosophers, but one capable of elevating the reasoning capacities of all men equally.²⁸⁵

²⁸⁴ Immanuel Kant, *Perpetual Peace*, *op cit.*, David Colclasure, trans. (8:369), 94.

²⁸⁵ In the *Republic* philosophers exercise authority because of their commitment to truth, which of itself can motivate rational men without recourse to the coercive powers of state enforcement. For common men, the deceptions of the “noble lie” and the threats of punishment in the afterlife (Myth of Er) are needed. As has been noted, such thinking is anathema to Kant, who seeks to develop the rationality of all citizens in order to invoke the ideal of the general will based on natural law. Kant’s separation of *recht* and ethics is crucial because, as previously noted, the state is charged with establishing and preserving the material conditions of life necessary for citizens to exercise the autonomy needed to develop virtues and formulate categorical imperatives. In Plato there is no such separation because the philosopher’s conception of truth is tied to a higher conception of the good. (Aristotle would later separate theoretical from practical reason,

Education is initially essential for disciplining children, and later for preparing young adults for the duties of citizenship, but ultimately it becomes an essential element in perfecting society and its laws over the course of many generations:

(N)o individual man, no matter what degree of culture may be reached by his pupils, can insure their attaining their destiny. To succeed in this, not the work of a few individuals only is necessary, but that of the whole human race. Education is an art which can only become perfect through the practice of many generations. Each generation, provided with the knowledge of the foregoing one, is able more and more to bring about an education which shall develop man's natural gifts in their due proportion and in relation to their end, and thus advance the whole human race towards its destiny.²⁸⁶

In contrast to Plato, Kant does not envisage an ideal, unchanging society, but one that has with great difficulty developed the rational separation of state and civil society over the course of history. Kant is pragmatic enough to realize that civil society does not, in practice, achieve a natural authority over the state, but must undergo a long process of reasoning with state authorities. Education disciplines the citizen into recognizing the necessity for a categorical obedience to law, but at the same time the citizen qua philosopher patiently seeks a redress of grievances not for herself but for the social order at large. In his well known example, Kant stipulates that a soldier must always obey orders, but must be encouraged to articulate in a public forum her reasons why certain orders should not be obeyed. Kant would reject the idea of civil disobedience, but he did approve of the French Revolution, not at all for its specific events but because of the underlying (a priori) impetus to long term political freedom that it represents. Most

but as noted earlier, he found a much easier cohesion between the two than Kant would later.) For an in-depth analysis of the relationship between politics and philosophy in both Plato and Kant, see Volcker Gerhardt, "Refusing Sovereign Power – The Relation Between Philosophy and Politics in the Modern Age," (284 – 304) in *Kant's Moral and Legal Philosophy*, Karl Ameriks and Otfried Höffe, eds. (Cambridge: Cambridge University Press, 2009), also H. Arendt, "What is Authority," (462–507) in *The Portable Hannah Arendt*.

²⁸⁶ Immanuel Kant, *Kant on Education*, (1803) Annette Chilton, trans. (Boston: D.C. Heath and Co., 1900), 10-11.

rational societies likely have, in Kant's view, Hobbesian origins, which although originally despotic, leave behind a historical legacy of disciplined obedience to law which Kant believes actually makes a civil society stronger in the long run:

A greater degree of civic freedom seems to be of benefit to the intellectual freedom of the people and yet also sets unsurpassable limitations on such freedom; a lesser degree of civic freedom, by contrast, creates room for the people to extend itself in accordance with all its powers. When nature has fully developed the seed concealed in this hard casing, to which it gives its most tender care, namely the tendency and the calling to free thinking, then this seed will gradually extend its effects to the disposition of the people (through which the people gradually becomes more capable of freedom of action) and finally even to the principles of government, which find it beneficial to itself to treat the human being, who is indeed more than a machine, in accordance with his dignity.²⁸⁷

The idea that state officials could rationally be persuaded that their own interests would be better served through the empowerment of civil society made Kant's position entirely different from that of his contemporaries. Thomas Jefferson, for example, imagined that bloody revolutions would be necessary every generation to keep the objectives of the state in line with that of its civilians. George Washington believed, for similar reasons, that civilian militias were preferable to a standing army. By the 1830's, Alexis de Tocqueville's experience of democracy in the United States left him prophetically fearful that citizens would willingly abandon democratic responsibilities in

²⁸⁷ Immanuel Kant, *What is Enlightenment?* David L. Colclasure, trans. (8:41-42), 23. Kant did not advocate freedom of speech in the modern sense of unlimited right of advocacy for any cause deemed suitable by citizens, but rather a condition of "publicity" through which citizens could be trained and receive practice in exercising their rights of free expression. Kant favoured "freedom of the pen," through which citizens could express their disapproval of edicts of the sovereign, while preserving their respect for the civil constitution. Kant, "On the Proverb: That May be True in Theory, but is of No Practical Use," (61 – 92) in *Perpetual Peace and Other Essays, op cit.*, [304] 82. For a more detailed analysis of Kant's views on publicity and freedom of speech, see Katerina Deligiorgi, *Kant and the Culture of Enlightenment* (Albany: State University of New York Press, 2005), 69 – 77. See also Allen Wood, *Kant's Ethical Thought* (Cambridge: Cambridge University Press, 1999). Wood raises the important point that Kant's views on freedom of expression are highly consequentialist, aimed at the preservation of public order.

exchange for peace, order and security, leading to the very spectre Kant most feared: despotic, paternalistic democratic states, driven by the tyranny of the majority.²⁸⁸

What has now been set forth is Kant's understanding of his own model, which seeks to solve ethical problems by situating them in as large a context as possible, a model that holds that the way any given society addresses ethical issues is dependent to a large degree on its rational evolution; i.e., its proclivity for privileging practical reason over theoretical reason, its capacity to identify and apply universal moral principles, and, most important, what Kant saw as its inevitable commitment to the creation of a highly intelligent and active civil society entirely detached from any considerations of self-interest or group interest. Kant was not blind to the demand that ethical models must be able to generate moral judgments that are specific to given, well-defined situations. Indeed, his whole moral theory in the *Groundwork* originates in commonly held moral beliefs; but the point is that it doesn't remain there; it branches out into a highly comprehensive and systematic moral and metaethical theory based upon the division between the metaphysics of morals and practical anthropology, ending finally in an elaborate system of duties that are delineated on the basis of universal principles and the historical development of societies and nation states. In societies where a given level of

²⁸⁸ Alexis De Tocqueville, *Democracy in America*, Gerald Bevan, trans. (London: Penguin Books Ltd., 2003), 805 – 806. In response to the news of Shay's Rebellion in Massachusetts, Thomas Jefferson, then U.S. ambassador to France, wrote a letter to Colonel William Stephen Smith dated November 13, 1787, which stated: "God forbid we should ever be twenty years without such a rebellion.... The tree of liberty must be refreshed, from time to time, with the blood of patriots and tyrants. It is its natural manure." By contrast, Kant was as fearful of a civil society exercising vigilante justice as he was of state violence that did not become more civilized over time. Civil society was the domain of virtue, religion and ethics, and thus had to responsibly exercise the public use of reason as a force of rational persuasion against the coercive force of the state. This aligns well with DeTocqueville's own fears of a citizenry comprised of isolated and self-oriented individuals disconnected from participation in public life and thus vulnerable to the tutelage and paternalism of the state, which gains increasing powers to act in an arbitrary fashion, subject to the objectives of special interests and elites and pressing for increasing control over education and even the public forums where responsible expressions of opinions occur. For Hannah Arendt, these elite ideologies would lead to the development of modern totalitarian states.

rational evolution has been achieved, it is possible to consistently and reliably generate a content of viable moral judgments, but this presumes a reliability of social and political institutions that Kant believed was more often than not a central issue in all such moral judgments. This belief correlates, of course, with the standard criticism of Kant's ethical theory; i.e., that its formalism renders it incapable of generating any moral content at all. The most powerful of the recent responses to this charge, Allen Wood's, demonstrates why it is weak and why the Kantian alternative of establishing a comprehensive context for moral judgments is so powerful. Wood argues that the form of the categorical imperative lies in its first formulation, i.e., the logical structure of universal law. Its content is set forth by the second formulation: "humanity or rational nature as an end in itself." The unity of form and content is thus found in the third formulation, i.e. autonomy.²⁸⁹ Our best understanding of the content of moral judgments is thus not in the stasis of some localized, real time situation but in the historical dynamics of a long term, multigenerational context that aims ultimately for the perfection of human rationality.

As noted earlier, the central historical tension underlying Kant's own version of his model originates in the reciprocal relationship between fate and providence. The former is the force of nature, whose teleology stipulates the rational perfection over the course of many generations. However, what nature grants is empirical in nature, and man is thus under a constant temptation to dedicate his reason exclusively to issues of theoretical rationality at the expense of practical reason. Under providence, men are able

²⁸⁹ Allen Wood, *Kantian Ethics*, *op cit.*, 116. The three formulations of the categorical imperative thus encompass logic, a concern for the whole of humanity and the metaphysical necessity of autonomy and universal law as applicable to all rational beings. Wood thus explicitly criticizes what he terms "trolley car ethics," i.e., "carefully crafted if artificial examples ... [used] to test and refine moral principle...." (44). As Wood notes, examples like these that employ agents to throw a switch that sends a trolley car down one tram line or another with different consequences in terms of deaths and injuries do employ Kantian terms and principles, but "could hardly get Kant's conception of moral theory more wrong if it tried." (45)

to recognize this process and realize the danger of its corrupting effects, as theoretical reason ultimately becomes dedicated to the magnification of human power. Kant summarizes this process with a very telling turn of phrase: “The history of nature begins therefore with the good, for it is the work of God. The history of freedom begins with evil, for it is the work of the human being.” The rational ends of nature can only become good if humans finally recognize their moral vocation in the exercise of freedom to perfect their rational nature through the exercise of pure practical reason.²⁹⁰

This undertaking presents a difficult, but not insurmountable challenge for Kant in the application of his model as he understood it. Given the historical circumstances of the late eighteenth century, it is not entirely impossible to imagine the possibility of a global civil society or a collection of advanced societies that had effected the separation of state from civil society, whose philosophers could not be imagined as “propagandists.” But what made Kant’s own vision of his model possible was the fact that it was set in Arendt’s first stage of technological development, with innovation largely concerned with harnessing natural forces. The onset of the industrial revolution, which was rapidly gaining momentum in Kant’s time, would significantly change the historical dynamic on which Kant’s own version of his model depended. By moving into Arendt’s second stage under which natural forces are magnified with the application of scientific theory, the state itself would ultimately have to take responsibility for scientific development - certainly in the application of technology to the methods of warfare, but also in the licensing of industrial development. Science itself would have to become part of the state apparatus, part of its mandate for national security and coercive enforcement of law, and thus the possibility of an independent and intelligently active civil society became far

²⁹⁰ Immanuel Kant, *Conceptual Beginning of Human History*, *op cit.*, (8:115-116), 29.

more difficult to achieve. Citizens would discover that it was increasingly difficult to overrule the judgments of scientific specialists and thus to exercise an appropriate authority over the functions of the state. Thus, the historical transition into Arendt's second stage necessitates a new approach to the Kantian model.

Bringing the Kantian Model up-to-date

Even to the point where Kant has developed his own model - a point reflective of the technical progress of the eighteenth century with respect to the direct utilization of natural forces – it still must be seen as one alien to the modern, empirical understanding of how models are supposed to work. The Kantian model, like all models, assimilates different variables in order to facilitate various types of ethical analysis, but the scope of the analysis is highly comprehensive and expansive in nature, covering the entire domain of social and political institutions and practices. Worse still from an empiricist standpoint is the Kantian practice of privileging qualitative analysis over quantitative analysis, of subordinating and limiting the highly rigorous dimensions (especially mathematical dimensions) of analysis by situating them within a wider context of social variables that pertain to social development, irrational patterns of behavior, historical contingencies or the comparative strengths of the state and civil society of a given civilization. Kant's model, as has been seen, is largely driven by its objective of identifying and elaborating universal principles, of using the social contract as an a priori idea of reason to evaluate progress in the development of laws.

The contrast with empiricist standards of model building could hardly be more striking. According to these standards hard sciences are the measure of all things and

demand that all knowledge must have its origin and content, as well as its methods of justification, firmly established in empirical experience.²⁹¹ Physical facts must be the drivers of all epistemological analysis, and moral facts, if such there be, are permitted only to the extent that they are shown to be supervenient on physical facts. Second order determinants, which stipulate the ordering or configuration of first order facts, are denied any metaphysical status and are usually subordinated to first order facts. Ethical analysis conducted under models constructed according to such standards is thus strongly oriented to determining a content of possible outcomes based on assumptions of the reliability of institutions, market functions or background circumstances to guarantee sound analytical results. The Kantian model is capable of providing such an analysis, but its real value lies in its more comprehensive dimension, in its capacity for determining the limits of theoretical reason in certain cases where contexts of uncertainty become manifest, in seeking the causes of moral disasters in historical considerations, or undertaking an evaluation of a set of laws and regulations with respect to their long term sustainability. Kant's model is rigorous because it takes nothing for granted and demands a full analysis of circumstances of cause and effect all the way down the structural chain and the impact

²⁹¹ Robert Hanna has published two book length studies comparing Kantian philosophy with the scientism that in his view still remains deeply embedded in analytic philosophy. He attempts to vindicate central Kantian concepts (synthetic a priori, analytic-synthetic distinction) against post Fregean analytic philosophy, arguing that this tradition established its core beliefs in contradistinction to those of Kant and that over time Kant's assessments have proved correct. (Hanna does not accept the strong metaphysical version of transcendental idealism; i.e., the two world thesis, which argues that noumenal and phenomenal stake out two different ontological realms, nor the weak two aspects theory that argues that two domains are just different standpoints. He argues instead for one world with two distinct sets of properties.) As Hanna notes: "If scientific or reductive naturalism is true, then its implications are stark and profound: nothing is ultimately or irreducibly mental, first-personal, or subjective; nothing is ultimately or irreducibly semantic; nothing is ultimately or irreducibly abstract or universal; nothing is ultimately or irreducibly modal; nothing is ultimately or irreducibly logical; nothing is ultimately or irreducibly a priori; nothing is ultimately or irreducibly normative; nothing is ultimately or irreducibly free or autonomous; and nothing is ultimately or irreducibly moral." Robert Hanna, *Kant, Science and Human Nature* (Oxford: Clarendon Press, 2006), 13. This is a follow up of his previous work, *Kant and the Foundations of Analytic Philosophy* (Oxford: Clarendon Press, 2001) The Kantian model thus gains strength from its greater inclusiveness and from its stronger metaphysical orientation.

these have on the reasons for action. In his comparison of Kantian and utilitarian ethical theories, Jens Timmermann notes: “Even where the two theories coincide in their judgment of what we ought to do, the difference is not about whether to intend the consequences of an action, but about why we ought to intend them. Kant’s theory would thus be anti-utilitarian even if his moral recommendations coincided with those of utilitarianism.”²⁹²

The value of the Kantian model will be seen more clearly in the final section of this chapter where its activation of the precautionary principle and its use of the ingenuity gap will be seen to have value in analyzing circumstances of acting into markets and into nature. However, even at a merely theoretical level, the extent to which empiricist biases have been built into moral analysis is striking, and even more so when it is realized how the deep entrenchment of empiricist presuppositions effectively precludes the possibility of Kantian analysis. In 2005, prior to the onset of the global financial crisis, the Harvard political economist Benjamin M. Friedman set forth a book length analysis of the imperatives of economic growth arguing that rising standards of living are so essential in shaping the social and political character of institutions and citizens alike that citizens should forebear from challenging the growth imperative on moral grounds.²⁹³ Not only does this analysis dismiss out of hand any possibility of structural weaknesses that might be irrevocably tied to growth imperatives (possibilities raised by the analysis of Tainter, Homer-Dixon, Minsky and others), but it seriously overemphasizes the role of virtue

²⁹² Jens Timmermann, “Why Kant Could not Have Been a Utilitarian,” (243-264) *Utilitas* vol. 17, no. 3 (November 2005), 249.

²⁹³ Benjamin M. Friedman, *The Moral Consequences of Economic Growth* (New York: Vintage Books, 2005).

theory, since failures both to pursue and to manage rising living standards can now be attributed to the failures of individual agents to live up to the high ideals of capitalism.

Kantian ethical theory, as noted earlier, ends with virtue theory, but only after a long and extensive analysis of the metaphysics of morals that sets forth a rigid distinction between such a metaphysics and practical anthropology as a precondition to the analysis of virtues and then establishes highly detailed contexts within which such virtues are to be exercised by autonomous agents: i.e., the determination of broad obligations and perfect duties, the balance to be struck between the development of state and civil society, the pursuit of perpetual peace through the ongoing perfection of republican laws. For Kant the perfection of virtues cannot be empirically grounded because this process of perfection extends well beyond the physical limitations of human life and becomes part of the human destiny of realizing its rational nature, and more specifically the rationality of practical reason. As noted in chapter 3, Kant's *sumum bonum* lies in the perfection of virtues that, for the individual, continues in the afterlife, and for a civilization, consists in the ongoing perfection of its laws.

But for Kant, this ongoing, multigenerational process is difficult enough if technological progress is limited to Arendt's first stage, i.e., the straightforward appropriation of natural forces to serve human ends. Under these conditions, it is possible to consider the possibility, in principle, of the abolishing of standing armies, the elimination of national debt or the eradication of armistices undertaken with secret provisions for future wars: all crucial elements in the Kantian program set forth in *Perpetual Peace*. However, the viability of these ambitions diminishes considerably once the achievement of Arendt's second and third stages becomes possible. Kant's

model thus needs to be brought up to date and thus pressed beyond Kant's initial specifications, an undertaking that will require input from contemporary Kant scholars.

The first dimension of the Kantian model, that of pure practical reasoning, requires little in terms of formal updating, except to point out its logical transition into the precautionary principle, which did not come fully into its own until the 1980's. This principle itself is based on a central deontological prohibition of ceasing action in the face of incomplete or contested knowledge and will be developed more fully in the final section of this chapter. However, the principle can be traced to Kant's restrictions on the domain of theoretical knowledge. Kant famously declared in the *Critique of Pure Reason* that "human reason ... is burdened by questions which, as prescribed by the very nature of reason itself, it is not able to ignore, but which, as transcending all its powers, it is also not able to answer." (Avii) This led Kant to privilege the powers of pure practical reason over that of theoretical reason, concluding in the final words of the *Groundwork for the Metaphysics of Morals* that "... we indeed do not comprehend the practical unconditional necessity of the moral imperative, but we do comprehend its incomprehensibility, which is all that can be fairly required of a philosophy that strives in principles up to the boundary of human reason." (Ak 4:463). Thus, using principles in the identification of known unknowns at the level of a priori analysis leads to their recognition in contexts where the precautionary principle itself would apply. And this in turn follows from the necessity of transcendental idealism, which as noted in chapter 3, requires the application of synthetic a priori principles, which in turn, as Robert Hanna argues, necessitates the recognition of the interconnection between the nomological forces of the natural world

and “the possibility of human freedom in nature.” As Hanna puts it, “the key to Kant’s metaphysics is his ethics.”²⁹⁴

From an historical perspective, the key point of transition from Arendt’s first stage to the second was the industrial revolution, which for the first time made it possible to magnify the effects of natural forces through the application of scientific theory.²⁹⁵ At this stage externalities become problematic and thereby introduce the gap between short term and long term considerations which would begin to present problems of pollution and resource depletion in the twentieth century. In his *History of Philosophy*, Bertrand Russell introduced the gap between theoretical science and applied science to mark the transition away from the pure, value-neutral experimentation of Enlightenment scientists and amateurs.²⁹⁶ In Russell’s view, the transition from theoretical to applied science marked a transition from emphasis on the individual (the scientific experimenter) to society at large, where cooperation was required to glean the maximum possible benefits from scientific achievement. But for Russell, it also led to a preoccupation with power

²⁹⁴ Robert Hanna *Kant, Science, and Human Nature* (Oxford: Clarendon Press, 2006), 23.

²⁹⁵ A strong argument that could be made in favour of the Kantian model is that it has aged well against competitive theories both with respect to Arendt’s second and third stages, and that it has done so precisely because of its metaphysical orientation. The prominent theories of Hegel and Schopenhauer aside, most nineteenth century intellectual movements were strongly empiricist in orientation and linked to greater or lesser extents to the realities of the industrial revolution and evolutionism. The great ideologies of Marx, liberalism, socialism and conservatism generated reactions by the end of the century in the form of the irrationalist/crisis philosophies of Nietzsche and Weber. (Exponents from both sides, e.g. Nietzsche and Mill, were explicitly opposed to Kant.) This century also generated extremes of optimism (William Godwin, utopian socialism) on the one hand, and unwarranted pessimism (Ricardo, Schopenhauer) on the other. Hannah Arendt herself commented critically on the unthinking extremes of different ideological positions: “Where the liberal writer sees an essentially assured progress in the direction of freedom, which is only temporarily interrupted by some dark forces of the past, the conservative sees a process of doom which started with the dwindling of authority....” Hannah Arendt, “What is Authority?” *op cit.*, 467. By contrast, Kant’s optimism is more soundly based upon a metaphysics of a priori principles that establishes a respective balance between *recht* and ethics as these apply to the domains of government and state (*recht* and external freedom) and civil society (ethics, virtue and internal freedom). Kant thus provides a stronger orientation to the systemic problems of externalities that pertain to Arendt’s second stage. Empiricist views, by contrast, are not well suited to the precautionary caveats attendant upon externalities. Arendt herself saw the combination of industrial progress and Social Darwinism as leading to totalitarianism.

²⁹⁶ Bertrand Russell, *A History of Western Philosophy* (New York: Simon & Schuster, 1945), Bernard Williams also favoured a distinction between applied science and a value neutral theoretical science.

and to the emergence of totalitarian governments as the benefits of technological advances were applied in military contexts. For Russell, this represented “a form of madness,” as states lost sight of the ultimate objectives and consequences of contingent scientific discoveries and became preoccupied with material ambitions.²⁹⁷

However, the development of applied science and its rapidly increasing complexity and sophistication has hardly been viewed as problematic, let alone “a form of madness.” Its overwhelming successes in creating material values has justified the growing entrenchment of a scientistic ideology, as discussed in chapter 2, and with it the rise in importance of naturalist, consequentialist and pragmatist modes of thought, which in turn underwrite the use of empiricist models as noted earlier. As a result economic and ethical decision models have largely assumed and thus taken for granted the structural soundness of markets and social/political institutions, as well as the rational motivations of market participants. This mindset has become so entrenched that the emergence of serious problems such as pollution and resource depletion have been largely ignored or marginalized over the past thirty years. With the predominance of this scientistic mindset, it was assumed that there were no significant gaps between short term and long term considerations, that the past would largely resemble the present, and consequently that mathematical models were always best for predicting future results.

Given the Kantian orientation to structural analysis, the Kantian model has aged well considering the number of structurally oriented theories that have emerged over the

²⁹⁷ *Ibid.*, 494. Russell’s comments are part of a long running debate over the relationship between theoretical and applied science, but Russell spelled out their ethical/philosophical implications and was the most prescient about their long term impacts. More recently Umberto Eco, using the more standard Science/Technology distinction, argued that European civil societies have a poor understanding of the relationship, and lack commitment to the funding of scientific research, given the uncertainties of its findings relative to the immediate benefits produced by technology. Umberto Eco, “Science, Technology and Magic,” (103-114) in *Turning Back the Clock: Hot Wars and Media Populism* trans. Alistair McEwen (New York: Harcourt Inc., 2007).

past century. Apart from Homer-Dixon's ingenuity gap (problems become so complex that timely solutions for them may not be probable) and Tainter's complexity theory (solutions to complex problems experience declining cost effectiveness or diminishing returns), a number of other theories address related structural problems. The economist Hyman Minsky in the 1970's set forth a theory of the inherent instability of financial markets, with structural soundness dependent upon the quality of credit accommodation and the types of debt servicing tolerated by the markets. Earlier in the twentieth century the French mathematician Henri Poincare developed theories related to the limits of predictive power of models based on the increasing complexity of the dynamics of these models and their need to achieve escalating levels of precision. Poincare emphasized the importance of contingencies, anomalies and non-linearities in model construction.²⁹⁸

Thus the Kantian model would appear to be highly conducive to upgrading in line with modern theoretical developments. The first level of the Kantian model leads almost directly to the central concepts of the precautionary principle, while the second, historical level can be very readily updated to accommodate various theories of structural deterioration. At both levels, the value of the enhanced Kantian model relative to its empiricist competitors with respect to the qualitative and comprehensive analysis of institutions and underlying conditions can readily be seen. However, the updating of the third level, which covers the relationship between states and civil societies, presents more serious problems because it requires a much less optimistic appraisal of the chances for human societies to improve and perfect their laws and legal structures over time.

²⁹⁸ Hyman Minsky, *Stabilizing an Unstable Economy* (New York: McGraw-Hill, 2008). For an analysis of Poincare's influence, see Nassim Taleb, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007), 174 – 183.

Given the rational proclivity of the human race, Kant believed that civil societies would globalize and provide a foundation for future relations between nation states based upon cosmopolitan principles. What became globalized, of course, were not civil societies but economies. This tendency was detected as far back as the early years of the twentieth century when the British economist John Hobson predicted that the growth imperatives for capitalist economies would require continual colonial development.²⁹⁹ Kant's own opposition to this trend is, as noted earlier, well documented, although his analysis could obviously not be conducted in terms of a capitalist imperative. However, it would be reasonable to claim that Kant's own moral condemnation of imperialist abuses ("the inhospitable conduct of civilized nations ... especially commercial: the injustice that they display towards foreign lands and peoples ... is terrifying."³⁰⁰) would have been qualified had Kant been aware of the progress in scientific rationality made possible by the industrial revolution. Once again, it must be clarified that Kant's ethical theory is based on a formulation of autonomy directed towards the objectives of the kingdom of ends such that pure practical reason must always be dominant over theoretical reason. But Kant's political philosophy must also be based on principles of pure practical reason that necessitate imperatives of coercive enforcement by the state that are essential for securing external freedom but at the same time apparently contradict the principles of autonomy. For this reason, then, the separation thesis establishes a strict division between the civil community (where autonomy must flourish and where coercive action must therefore be strictly prohibited) and the state, which must rigidly enforce the

²⁹⁹ Cf. P.J. Cain, "Variances on a famous theme: Hobson, international trade and imperialism, 1902-1938," (31-53) in *Reappraising John Hobson: Humanism and Welfare*, Michael Freeden, ed. (London: Unwin Hyman, 1990). For Hobson the imperatives of global industrial expansion were driven by industrial necessity and led to war and increased international tensions, not the perpetual peace that Kant envisioned.

³⁰⁰ Immanuel Kant, *Perpetual Peace, op cit.*, [358-359], 119.

law. As a result of his historical analysis, Kant recognized the ongoing dynamics of the struggle between the a priori principles regarding an ideal of pure practical reason and the reality of historical progress: “Objectively (i.e., in theory) there is utterly no conflict between morality and politics. But subjectively, in the self-seeking inclinations of men ... this conflict will remain, as well it should; for it serves as the whetstone of virtue.”³⁰¹ It is thus incumbent upon civil societies to address issues of scientific and technological progress by adopting those broad obligations (i.e., duties that have an ultimate objective under pure practical reason, but can only be discharged over time) deemed best able to close the gap between morality and politics.

Kant himself is deeply aware of how unbridgeable this gap can be, and in fact he laboured mightily to imagine global conditions that might approximate Arendt’s second stage, i.e., he imagined dilemmas under which one nation might choose to violate the terms of a treaty in order to address some unanticipated condition required for the survival of the state. Under a condition, say, of commercial progress, a landlocked nation may require access to a land corridor not under its domain that leads to a seaport. (“If a smaller nation is so located that it divides some territory that a larger one regards as necessary to its preservation...”³⁰²) Such a condition would, in Kant’s view, so arouse inevitable suspicions and distrust that the afflicted nation would harbour secret intentions to use military force to correct the situation, and so render impossible one of Kant’s first preliminary articles for perpetual peace (i.e., “no treaty of peace that tacitly reserves

³⁰¹ *Ibid.*, [379-380], 134.

³⁰² *Ibid.*, [384], 137. This can also be seen in the pretext given for Iraq’s invasion of Kuwait in 1990. The U.S. insisted that Iraq repay loans granted by Kuwait with respect to the Iran-Iraq war (1980-1988). Saddam Hussein insisted on a prior understanding with U.S. officials that the loans were to be forgiven. Saddam thus justified the invasion on the grounds that Kuwait was tapping into oil reserves that extended underground into Iraq’s sovereign territory.

issues for a future war shall be held valid” [*Perpetual Peace*, [343]]. Kant thus proposes that this first preliminary article must be subject to a universal principle that he goes so far as to regard as a “transcendental formula of public right”:

All actions that affect the rights of other men are wrong if their maxim is not consistent with publicity.³⁰³

By “publicity” Kant understands the full transparency of intention, and he draws an analogy to the moral imperative that compels citizens to leave the state of nature and enter the civil state. Since the purpose of forming the state is to secure the intelligibility of property rights, all the citizens might collectively be tempted to harbour secret maxims to depose the sovereign ruler of the state if he behaves in a manner destructive of this high moral purpose. As noted earlier, Kant believes that maintaining such a right in reserve is “wrong in the highest degree,” but Kant now goes further by arguing that retaining such secret intentions to revolt contradicts the very moral imperative that compelled them to enter the civil state in the first place: “The wrongness of revolt is revealed by the fact that the maxim through which one publicly declares it renders one’s own intention impossible. One must therefore necessarily keep it secret.”³⁰⁴ Given that such secrecy and lack of transparency undermines the first and highly essential preliminary article of perpetual peace, it becomes a necessary, a priori principle of historical progress that all nation states work towards the achievement of a “federative union,” an organization equivalent to the United Nations, which must render possible genuine treaties of peace.

³⁰³ *Ibid.*, [381], 135.

³⁰⁴ *Ibid.*, [382], 136. On Kant’s account the sovereign ruler of the state will not harbour secret intentions because his power to rule is understood to rely purely on the exercise of overwhelming physical force, and with this power he has no motive for any secret intentions. Kant thus takes a Hobbesian position and denies any religious authority for sovereign rule, any such concept as “divine right of kings.” The Kantian model thus clearly needs to be adapted to accommodate modern concepts of deterrence or brinksmanship.

Kant is thus led from his negative transcendental formula of public right to a positive one: “All maxims that require publicity (in order not to fail of their end) agree with both politics and morality.” Kant in fact believes that all publicly adopted maxims must be founded on this basis if mankind is to realize the objective of the kingdom of ends and therefore align humanity’s “fate” of rational progress with the “providence” of establishing such moral progress on a fully moral basis. However, what this shows is that despite all of Kant’s efforts to imagine moral dilemmas built around the conflicts attendant on the mandate of nation states to both secure necessities for their citizens and honour their treaties, he cannot secure the transition from Arendt’s first stage, in which the forces of nature can be non-problematically aligned with human purposes, to the second stage, in which the magnification of natural forces inevitably creates externalities. As noted earlier, the second stage inevitably generates “known unknowns,” unforeseen consequences that we know will occur within certain human enterprises, and thus render impossible the transparency of intention that Kant believes necessary to the achievement of perpetual peace. As technological progress advances inexorably under the imperatives of economic growth, secrecy becomes inevitable and even morally desirable in the process of research and development and bringing new products to market, which in turn will lead inevitably to the secrecy necessary to the improvement of military technology – and to the state and corporate espionage that will almost certainly follow.³⁰⁵

Updating and upgrading the Kantian model is thus required to accommodate the transition to the second and third stages of Arendt’s articulation of scientific progress, which in turn will necessitate the adoption of the precautionary principle to address both

³⁰⁵ In this regard, Kant’s theory could receive assistance from the principle of double effect, as discussed in Chapter two. Nation states could commit themselves to full transparency over time via broad obligations.

“know unknowns” and “unknown unknowns.” Even though Kant’s affirmative principle of public right cannot reasonably be achieved, it is still possible to update Kant’s model to require the retention of his cosmopolitan principle of right. In order to achieve this, the Kantian imperative of a global federative union of states must be retained, but this will now place severe pressure on civil societies to work towards these objectives under the constraints of mutual suspicion and distrust that follows from the infeasibility of the affirmative principle of public right. With this failure, more effort must now be expended on the achievement of Kant’s proposal for a cosmopolitan civil society, one that does have a clear religious objective, but also built on the collective efforts of individual civil societies to overcome the impediments that result from Arendt’s second and third stages.

At Arendt’s first stage, as noted, the relationship between civil society and the state – or in Kant’s words, between morality and politics – is relatively unproblematic, and Kant’s own vision of his model can largely be used. With its focus on the security of property rights, the state can become the domain of heteronomy, of Kant’s material practical principle, and of the pursuit of hypothetical imperatives. At this level state officials like lawyers and politicians are, as we have seen, largely unimaginative bureaucrats concerned with the strict execution of rigidly defined juridical duties. This state of affairs is then feasible for two principal reasons: first, because of the oversight provided by civil society, which functions as the moral domain of fully autonomous citizens; second, because the focus of property acquisition is focused on necessary goods.

Kant’s a priori view of property as necessities aligns with a comparable portrayal of goods as necessities provided by Adam Smith in the *Wealth of Nations*. But Kant himself provides two specific (yet at first sight mysterious) images essential to the social

contract: the first is an image of the Earth as a limited spherical surface; the second of individual citizens of the Earth as occupying specific points on this surface. These two images then come together in Kant's analysis of the concept in social contract theory of "original possession in common." And it is in this context that Kant's political theory shifts from its focus on individual nation states and takes on a cosmopolitan focus:

Since the earth's surface is not unlimited but closed, the concepts of the Right of a state [i.e., between citizen and state] and of the Right of nations [i.e., between two or more nations] lead inevitably to the Idea of a Right for all nations (*ius gentium*) or cosmopolitan right (*ius cosmopolitanum*). So if the principle of outer [external] freedom limited by law is lacking in any of these three possible forms of rightful condition, the framework of all others is unavoidably undermined and must finally collapse.³⁰⁶

There is controversy in the Kant literature with respect to the relationship between these concepts.³⁰⁷ However, Kant scholar Katrin Flikschuh argues that all these concepts, as well as their interrelationships, must be understood metaphysically according to a priori principles.³⁰⁸ Clearly, Kant does not intend his images of individuals standing on patches of earth to be understood literally, but instead as a way to bridge the two concepts of "*recht*" (right) as an inherent right and property as an acquired right. Human beings are thus born with an inherent right to claim natural resources sufficient for their survival, which in turn leads to Kant's concept of "self-sufficiency" or "independence," which, along with freedom and equality, function as a priori principles of reason with respect to the establishment of the social contract. As Kant imagined the formation of the first

³⁰⁶ Immanuel Kant, *Metaphysics of Morals*, 6:311.

³⁰⁷ Cf. Leslie Mulholland, *Kant's System of Rights* (New York: Columbia University Press, 1990); Charles Covell, *Kant and the Law of Peace* (London: Macmillan, 1998); Allen Rosen, *Kant's Theory of Justice* (Ithaca: Cornell University Press, 1993); Daniel Weinstock, "Natural Law and Public Reason in Kant's Political Philosophy," (389-411) *Canadian Journal of Philosophy* vol. 26 (1996); Mary Gregor, "Kant on 'Natural Rights'," (50-75) in *Kant and Political Philosophy*, Ronald Beiner and James Booth, eds., (New Haven: Yale University Press, 1993).

³⁰⁸ Katrin Flikschuh, *Kant and Modern Political Philosophy* (Cambridge: Cambridge University Press, 2000).

human societies, warfare and competition for basic resources would drive the various clans and tribes apart, with a resultant migration across the surface of the earth to secure the best resources. This process would, however, have its limits, and thus Kant does not, on Flikschuh's metaphysical interpretation, argue for "original possession in common" as indicating a physical division of resources among Earth's citizens,³⁰⁹ but rather as the source of an a priori principle that must ultimately necessitate the federative union of all nations, a federation united in recognition of the necessity of conserving global resources.

Kant takes a non-problematic view of this process, since he has no difficulties with individuals taking unilateral possession of property both in the state of nature and even in civil society, so long as the former entails the imperative of forming a civil state and the latter the necessity of transforming empirical possession into intelligible possession. However, he does argue that domestic justice at the level of the individual state cannot be established without global justice between nations, which in turn necessitates that a global civil society must develop concurrently, if not in advance of the development of civil societies at the level of individual nation states.

This is obviously problematic for contemporary societies with respect to the realization of cosmopolitan ideals, but was even more so in Kant's time. Kant himself specifically cited the dangers of radical evil infecting civil society and of establishing political society on the basis of principles of benevolence.³¹⁰ However, there are also clear dangers in the transition to Arendt's stages 2 and 3, as issues like sustainability and resource depletion have potentially serious impacts on the Kantian imperatives for securing necessary goods. With economic globalization, political institutions and

³⁰⁹ *Ibid.*, 177-182.

³¹⁰ Immanuel Kant, *Perpetual Peace*, *op cit.*, [366], 124; [386], 139.

sophisticated networks of trading and banking relationships become vulnerable to failure. Political systems thus must become much more responsive to problems than would be the case if left in the hands of Kant's politicians, lawyers and functionaries. Civil societies must thus become highly proactive and capable of assuming Kant's "broad obligations," which necessitate considerable flexibility and considerable oversight in establishing long term objectives according to a priori principles. Simple rule following or rigorous compliance to judicial duty will no longer be sufficient to ensure fully sustainable policies with respect to necessary goods such as food, oil, water, or financial services.

However the Kantian model can be modernized with respect to providing a stronger role for a cosmopolitan civil society, organized along the lines of NGO's or citizen action committees. The social contract theory bequeathed by Kant to the model makes provision for the a priori idea of the general will, Rousseau's concept of a social uniformity generating unanimous decisions on crucial or essential political issues. Kant used the concept much less empirically than did Rousseau in order to generate principles with respect to the influence exercised by civil society over the political process. Kant's understanding of the general will thus engenders a reciprocity relationship between natural law and the idea of the social contract. On the natural law side, we need external and objective determinants of the means of preserving necessary goods in the face of vast and ongoing technological changes. However, if the general will were to depend solely upon such external determinants, the ideal of autonomy would be lost. The contract idea is thus necessary to generate the required social consent, but the contract in turn could not function without natural law without resulting in decisions of the general will that would be contingent in nature. This alignment of general will, contract and natural law also

coalesces with Kant's reciprocity between state and property, which in turn facilitates the legal concepts of eminent domain and right of necessity (which allows a state to gain ownership or conservatorship of property in the event of a national emergency). Ethical and policy principles of sustainability and public oversight are also facilitated.³¹¹

An updated and upgraded structure of a Kantian model (with respect to the relationship between state and civil society) can now be seen to be emerging with respect to determining instances where the precautionary principle can be invoked. Securing beliefs about states of affairs that ought to be the case (and necessarily must be as well) is now possible in a social context, given the mandate of autonomous citizens to exercise ethical rationalism and to form themselves into ethical communities capable of animating a civil society with the authority to exercise competent oversight of a given political state. What has been lost in the process is Kant's optimism that morality and politics can be brought into alignment based on Kant's principles of transparency. The realization of humanity's destiny for perfecting its rational nature (fate) in line with its long term mandate under pure practical reason for perfecting laws and achieving the kingdom of ends is now, however, more problematic than Kant originally thought. But sufficient theoretical grounds have now been created for determining how the Kantian model works in practice.

³¹¹ For a detailed analysis of Kant's alignment of natural law and the general will, see Katrin Flikschuh, *Kant and Modern Political Philosophy*, *op cit.*, 144 – 178. In Flikschuh's view, continued progress towards this alignment within individual nation states will create a growing propensity towards both the rights of nations (reflected in the ultimate establishment of a federation of nations) and the development of cosmopolitan right. The principle of original possession is thus related to the security of global resources.

The Kantian Model in Action

In taking the Kantian model out of theory and putting it into practice, an initial and brief outline is required with respect to the philosophical mindset and initial set of assumptions of the Kantian practitioner. Activating the moral sovereignty granted to her by pure practical reason in her role as a fully individuated and autonomous agent, she first uses transcendental idealism in order to recognize that there are real and rigid metaphysical boundaries with respect to theoretical reason, which in turn privileges the authority of practical reason. From this point it is recognized that she has metaphysically distinct beliefs about the states of affairs that govern the way the world is and the way it ought to be. This agent does recognize, however, that she is also in a transition through history, as science continually expands the domain of theoretical knowledge. Thus, these metaphysical boundaries are also in transition and in an ongoing state of dynamic tension. As a result the agent is constantly attuned to conditions of uncertainty in the acquisition of theoretical knowledge, as well as to the a priori principles that historical study elucidates with respect to the imperatives of perfecting laws over time. She is aware that these imperatives can be put under threat by the application of scientific knowledge that either, of its own accord, threatens to engender high risk externalities or else leads to a focus on social power that could, as both Kant and Rousseau recognized, threaten to unleash radical evil and its morally untenable maxims as a festering condition of social and political life. As the agent thus continuously differentiates her descriptive and normative beliefs, she becomes aware of states of affairs that both ought to be the case and must also hold of necessity. As will be seen shortly, this recognition becomes the

basis for invoking the precautionary principle, arguably the most significant application of the Kantian model.

First, however, this agent must interact with other likeminded agents within a rational civil society. There is a rigid imperative that compels all such agents to organize themselves into a civil state that will make possible the intelligible acquisition of property as well civil deliberations that are entirely free of coercive forces so as to facilitate the formation of a general will. This is only possible, as Kant saw, if other societies are achieving this same progress, such that a cosmopolitan civil society begins to take shape, in turn facilitating an alignment of politics and morality built upon fully transparent maxims. Such maxims have to be achieved by a global civil society fully aware that empirical pressures that originate both with international politics and within the mechanics of scientific progress will tend to undermine these moral objectives, and with it the larger historical objectives of keeping fate and providence in alignment and with it the realization of the kingdom of ends over the course of many generations..

Outlined in this manner, the contrasts between the Kantian model and those proposed by consequentialists and Rawlsian constructivists come clearly into focus. On both accounts, metaphysics must be excised to the greatest possible extent in order to preserve a working model fully empiricist in its orientation.

With respect to consequentialism, the activist role for government advocated under the Kantian model re: the metaphysical formulation of property in terms of its intelligibility – one that necessitates a biconditional or reciprocal relationship between the concepts of state and property – may well align with similarly activist programs for state welfare that emerge from, for example, Robert Goodin's recent efforts to revive what he

describes as “government house utilitarianism.”³¹² Both programs do make strong provision for an interventionist role in markets on the part of government, and Goodin, like Kant, marks a clear demarcation between the roles of government and civil society and advocates the formulation of policies in the face of uncertainty. Goodin claims that there are specific justifications for utilitarianism in the contexts of government policy formation that do not apply for individuals. Policy impacts on specific individuals cannot be known with certainty, but cost benefit calculations with respect to a given policy can result in generalized determinations of the greatest good for the collective as a whole.³¹³

Goodin’s case is based on predictable determinations of a collective good that are independent of specific harms that can be suffered by individuals. (In his example of seat belt legislation, Goodin notes that it unquestionably reduces overall traffic fatalities, even though in specific cases individual lives are saved by not wearing belts.) However, his model makes no provision for the uncertainty of all consequences at the level of either the collective or individual citizens in cases where the potential consequences are catastrophic in nature. Moreover, Goodin argues that the state can be the source of ethical decisions that can supersede those originating with civil society. This, of course, entirely contradicts Kant’s theory of autonomy and moral sovereignty as vested in individual agents. Therefore, any government house program that Goodin could design with respect to conserving necessary goods or determining conditions of possibility for social existence could not be readily justified with respect to invoking some set of

³¹² Robert E. Goodin, *Utilitarianism as a Public Philosophy* (Cambridge: Cambridge University Press, 1995).

³¹³ Kant’s political philosophy clearly requires some provision for general welfare, but the nature and extent of it varies widely according to different interpretations. On one line of thinking, welfare is permitted only to the extent that it is necessary for the survival of the civil state. Cf. Howard Williams, *Kant’s Political Philosophy*, *op cit.*, 196-198. Other Kant scholars (Allen D. Rosen, Sarah Holtman) favor a larger role for the state based either on a general principle of benevolence or else on specific provisions of welfare.

deontological prohibitions, given the concomitant need to privilege some universal principle of sustainability over the general good. Nor could there be any dynamics for transforming a short term program for the general good into a long term program that might be radically different in nature, as is possible under the Kantian model. Again, Jens Timmermann's point holds true: the content of a Kantian prescriptive program and a utilitarian one might be entirely in alignment and yet the Kantian model would differ crucially because of the reasons for undertaking specific ends.

The Kantian model proposed here is similar to utilitarian ones with respect to the focus on states of affairs, and so both differ from the Rawlsian program, which emphasizes interpersonal obligations over states of affairs. Rawls finds common cause with Kant against utilitarianism in privileging right action over the good; however Rawls, like the utilitarians, privileges an empiricist approach, specifically one that makes instrumental rationality the foundation of practical reason. In the Rawlsian scheme, we seek initially to derive principles of justice from an original position based on the veil of ignorance, but once these principles have been secured, we can rely upon the soundness of institutional frameworks to guarantee rights, as well as on a scheme of "primary goods" to secure economic benefits and necessities.³¹⁴

³¹⁴ Rawls famously argued that the justification of political liberalism as a political philosophy was "freestanding," i.e., it "leaves untouched all kinds of doctrines, religious, metaphysical, and moral, with their long traditions of development and interpretation." John Rawls, "Reply to Habermas," *Journal of Philosophy* vol. 92 (March 1995), 134. Rawls held his philosophy to be "political, not metaphysical," and so all manner of moral and religious views could be accommodated under the same liberal state, as long as there was a common adherence to a uniform set of political principles such as tolerance, mutual respect, etc. This creation of an "overlapping consensus" was seen as problematic in Rawls's time (1970's, 1980's) because society could consist of fringe groups (Hell's Angels, Ku Klux Klan, etc.) that stood outside of the basic structure (the institutional uniformity that bound citizens together), but yet were within its political domain. Such groups did not uphold, believe in or conform to the basic political beliefs, but yet the political obligations owed by all citizens had to be based upon commonly shared beliefs in order to satisfy the empirical requirements of Rawls's theory. Rawls could easily rebut this charge because society will always have fringe groups that are to be addressed by the coercive force of law, given that most citizens are educated into the moral and political life by the society in which they live, and so they will

Current issues of climate change, resource depletion, and the security of financial markets make the Rawlsian approach much more problematic today than was the case over forty years ago when Rawls's *Theory of Justice* was taking its final shape. At that time mainstream economists such as Robert Solow were actively hostile to the very idea of resource depletion, as evidenced in the response to the *Club of Rome* report. Rawls's reliance upon instrumental rationality in his empiricist approach entailed a necessary dependence upon sound and reliable institutional structures to ensure that descriptive rationality could not become far out of alignment with normative rationality and that human desires could effectively provide a long term direction for human reason. This is most particularly seen in Rawls's concept of primary goods, under which it is assumed that we can treat material wealth, in the Lockean fashion, as essentially unlimited and fully capable of servicing the life plans of all citizens, as amply available as the non-material elements of rights, powers, privileges and self-esteem. Making such a theory fully functional entails for Rawls a complex and highly elaborate exercise of knowledge deprivation in the original position, under which we must be kept in ignorance of our interests until such time as the principles of justice can be clarified.³¹⁵

adopt that society's values. But this rebuttal is much less effective with respect to special interest groups like corporations that can use lobbying to secure political favours and push the political system towards corruption – and this was not an issue in Rawls's time. For Rawls, then, primary goods and the structure of free markets must carry a particular burden of ensuring the viability of a society and state and the basic structure that sustains them both. (Habermas makes a similar mistake by assuming that a commitment to rational dialogue guarantees or assures commitment to the basic moral values that make such discourse possible.) Specific higher order commitments to honesty and truth are required and this imposes certain metaphysical demands on both Rawls and Habermas. A convincing argument along these lines is advanced by Jeffrey Reiman, "Postmodern Argumentation and Post-Postmodern Liberalism, with Comments on Levinas, Habermas and Rawls," (251 – 272) in *On the Relevance of Metaethics: New Essays in Metaethics*, Jocelyne Couture and Kai Nielsen, eds. (Calgary: University of Calgary Press, 1995).

³¹⁵ An empiricist defense of Rawls's concept of primary goods is offered by Paul Guyer, *Kant on Freedom, Law and Happiness* (Cambridge: Cambridge University Press, 2000), 271. In Guyer's view, the concept of primary goods is non-problematic in the sense that no duality is created by the concept between moral and instrumental rationality: the moral approach to primary goods can be seamlessly integrated with the political approach. Guyer's own empiricism results in a close alignment of Rawls and Kant on this

The contrast to the Kantian model works out very much to its own favour given modern conditions. With Kant we are constantly compelled under an overriding moral imperative to maximize our collective knowledge up to its metaphysical limits (i.e., Kant's logic of illusion), and then to extend beyond that on the side of practical reason. In stark contrast to instrumental rationality, ethical rationalism holds that descriptive and normative rationality do not come under an automatic alignment, and we are constantly compelled under the motivation of internal duty to maximize both our moral and scientific knowledge to the maximum degree possible. But given the further Kantian imperative for civil society to continually strive towards a cosmopolitan ideal and stay several steps ahead of the political developments occurring within the state apparatus in the process, the Kantian model thus puts a very high premium on community knowledge or a common wisdom that becomes the basis for addressing problems and/or emergencies that will require a legislative or regulatory response by the state.³¹⁶

In contrast to the Rawlsian model, which requires us to deliberately blind ourselves to our own interests for the purposes of securing basic principles, the Kantian model is founded on the belief that maximal knowledge is required at all times to detect the presence of previously unknown rules or principles that become necessary with respect to the growing complexity of our modern technological society. Full knowledge of the pattern of individual and collective interests thus becomes a necessary first step in ensuring, as knowledge continuously expands and reaches into more sophisticated territory, that communal knowledge constantly stays one or even several steps ahead of

issue, whereas the approach taken in this dissertation is based on a necessary dualism between instrumental rationality and pure practical reason that makes the concept of primary goods deeply problematic because of the conditions of possibility needed to make them viable and the lack of viability of free markets.

³¹⁶ As noted earlier, this creates a particular difficulty for obtaining and implementing expert opinion. In advanced technological societies, experts can often earn more in the private sector than the public sector.

the curve and becomes the means of generating universal principles through the categorical imperative, principles that in turn become the basis for a collective ideology.

This necessity has become apparent during the credit crisis of 2008-2009, as a very significant ideological rift has opened between macroeconomists of different philosophical persuasions. Paul Krugman, the Nobel laureate in economics in 2008, argues that the credit crisis has exposed what he terms a “dark age of macroeconomics.”³¹⁷ On one side are those economists who have staunchly supported unrestricted free markets, who claim that market agents always behave rationally and that markets have such a high degree of structural efficiency that prices almost always provide accurate reflections of underlying value. On the other side are those who are more skeptical, i.e., behavioral economists, who take note of the irrational dimensions of human judgments and argue that speculative bubbles can create misalignments between price and value.

A similar report produced by the Wharton School of Business, “Why Economists Failed to Predict the Financial Crisis,” extends Krugman’s analysis, citing results from an earlier paper, the “Dahlem Report,”³¹⁸ which makes the following conclusions:

The economics profession appears to have been unaware of the long build-up to the current worldwide financial crisis and to have significantly underestimated its dimensions once it started to unfold... In our view, this lack of understanding is due to a misallocation of research efforts in economics. We trace the deeper roots of this failure to the profession’s insistence on constructing models that, by design, disregard the key elements driving outcomes in real world markets.³¹⁹

³¹⁷ Paul Krugman, “How Did Economists Get it so Wrong?” (36-43) *New York Times Magazine* (September 6, 2009).

³¹⁸ The Wharton report, “Why Economists Failed to Predict the Financial Crisis,” is located at http://knowledge.wharton.upenn.edu/printer_friendly.cfm?articleid=2234. The Dahlem Report is formally titled: “The Financial Crisis and the Systemic Failure of Academic Economists,” authored by David Collander, Hans Fölmer, Armin Haas, Michael Goldberg, Katarina Juselius, Alan Kirmin, Thomas Lux and Brigitte Sloth, Kiel Institute for the World Economy (Kiel working papers) and is located at: <http://www.ifw-members.ifw-kiel.de/publications/>.

³¹⁹ *Ibid.*, 2.

Noting the entrenched problems of “mathematical models that improperly assume that markets and economies are inherently stable” and which overlook human proclivities toward irrational behavior, the report continues:

Economic modeling has to be compatible with other insights from other branches of science on human behavior.... It is highly problematic to insist on a specific view of humans in economic settings that is irreconcilable with evidence.³²⁰

The problem, then, is the over-dominant role played by complex mathematical algorithms and computations within these market-driven models, or as Krugman puts it: “[T]he central cause of the [economics] profession’s failure was the desire for an all-encompassing, intellectually elegant approach that also gave economists a chance to show off their mathematical prowess.”³²¹ According to the Wharton report, this led to a “control illusion,” the belief that the complex mathematical calculations used in the models reflected the increasing sophistication of the calculations used by private agents in the market in the deployment of a multiplicity of derivatives instruments, regardless of the actual degree of risk engendered by these financial products. According to former Federal Reserve Chairman Alan Greenspan, already resilient markets would be made even stronger by this product diversity: “[A] wider variety of financial products allows market participants to place ever more refined bets, so the markets as a whole better reflect the combined wisdom of all the players.”³²²

The Kantian model, in this case, would prescribe an imperative of communal knowledge that must of necessity exceed the knowledge domain of individual agents

³²⁰ *Ibid.*

³²¹ Paul Krugman, *op cit.*, 37.

³²² Wharton Report, *op cit.*, 3. Greenspan’s views reflect earlier information theories of Friedrich Hayek, who also believed that markets are made stronger by the fact that markets reflect the extensive collective knowledge of individual market agents, a fact which in turn should prohibit government intervention in the economy. Cf. Friedrich Hayek, “The Origins and Effects of Our Morals: A Problem for Science.” (1967).

acting in the economy. Such knowledge must be communal in the sense that it is openly accessible and freely available to all market agents; at the same time, it must also be the basis of regulatory actions and policies formulated by central banks and other agencies of the government. What is clearly unacceptable in the results of the 2008 credit crisis is the lack of certainty on the part of central bankers and government authorities as to the true nature of the crisis, as for example in the uncertainty expressed over the question as to whether banks were facing a liquidity crisis or a solvency crisis.³²³ The financial basis of any modern economy represents the provision of services that are vitally necessary to that economy, and so represent conditions of possibility for the functioning of any society, as necessary as the safeguarding of food, water and petroleum supplies. In all such cases of safeguarding the provision of necessary goods and services, any civil society and its government authority must be highly proactive in ensuring that the conditions of possibility for civilized existence are satisfied. According to the Kantian model it is simply too risky to allow knowledge possessed by individual agents to supersede that held by civil society and government authorities. In short we cannot put any reliance upon instrumental rationality or some Rawlsian concept of “primary goods” to ensure that the individual life projects of private citizens can be carried through to completion by relying upon sound markets and the structural resiliency of institutions.

What the credit crisis also demonstrates are the serious dangers that are incurred when individual agents embark on projects that promise strong returns in the short run and yet engender long term risks, when the capacity of such projects to generate such profits vastly outruns the knowledge of these agents with respect to the deeper implications of their activities. In such cases instrumental rationality is willing to make

³²³ Cf. Roger Lowenstein, *The End of Wall Street* (New York: Penguin Press, 2010), 285 – 298.

dangerous applications of limited expertise, applications that would be prohibited under exercises of ethical rationalism because of the risks of catastrophic consequences.³²⁴

Because such exercises of ethical rationality are part of the domain of the Kantian model, it is this model that best identifies the conditions under which the precautionary principle should be invoked.

The precautionary principle is a universal principle invoked in cases where there is scientific disagreement with respect to the consequences of some set of actions or policies and if one of the possible outcomes represents a catastrophic scenario or one with features deemed unacceptable by the society affected. Under the precautionary principle the activities or policies in question are subjected to some set of prohibitions until it is clearly established or proven that such actions or policies can be made safe. A burden of proof thus rests with the advocates of these policies and actions to establish, by means of empirical testing, evidence that these activities will not result in catastrophic results.³²⁵ What is vitally important to note is the fact that invoking the principle itself is not based on empirical judgments per se, although probability assessments of risk do contribute to the final decision. Rather, invoking the principle is based upon a priori determinations of conditions of possibility of civilized existence such as those that, as has been noted, form the basis of Kant's political philosophy. Most specifically, the Kantian condition of independence or self-sufficiency entails that independent and autonomous citizens must have the capacity to bring property into existence and to make its ownership intelligible, and for this reason a fully biconditional or reciprocal relationship must exist between

³²⁴ Nouriel Roubini and Stephen Mihm, *Crisis Economics* (New York: Penguin Press, 2010), 94 - 103.

³²⁵ The precautionary principle has thus been opposed by the proactionary principle, which privileges the economic imperatives of growth, and thus places a burden of proof on the authority who would prohibit some innovation to provide immediate and definitive empirical proof here and now that the innovation is not safe (as opposed to the precautionary principle, where an indefinite period of proof is granted).

state and property in order to ensure that these conditions of possibility have been fully realized. To accomplish these objectives the state has a mandate to guarantee external freedom by ensuring that all goods and services necessary to the realization of private property (e.g., food, water, petroleum, financial services) are secured and provide the basis of social sustainability. Private property ownership is thus accorded but may under specific circumstances be rescinded under Kant's principles of state/property reciprocity that could stipulate conditions of eminent domain if necessary. Invoking the precautionary principle would thus occur under conditions of insufficient knowledge, where the risks of safeguarding private property cannot effectively be determined.

This process for invoking the precautionary principle (without the Kantian dimensions) has been confirmed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in its March 2005 report on the precautionary principle, which details its history, moral justification and applications in law.³²⁶ The report is careful to distinguish the precautionary principle from "the prevention principle," which holds that under certain circumstances where all probabilities can be effectively calculated certain activities may be prohibited. As the report notes, the precautionary principle:

applies when there exist considerable scientific uncertainties about causality, magnitude, probability and nature of harm.... Some form of scientific analysis is mandatory.... Grounds for concern that can trigger the PP are limited to those concerns that are plausible or scientifically tenable. This distinguishes the PP from the prevention principle: if one does have credible grounds for quantifying probabilities, then the prevention principle applies instead.³²⁷

³²⁶ The World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), *The Precautionary Principle* (Paris: UNESCO, 2005).

³²⁷ *Ibid.*, 13.

The UNESCO report thus provides clear grounds for distinguishing the PP from the prevention principle on the basis of principles, and specifically principles applicable only to the PP, for which a priori considerations apply. In spite of this academic studies exist that conclude that the precautionary principle can only be invoked in circumstances under which probability assessments apply, thus artificially abolishing the distinction with the prevention principle under the insistence that all conditions under which the principle is to be invoked must be subject to cost benefit analysis. In his book length study of the precautionary principle, Julian Morris distinguishes between strong and weak PP, which allegedly exhaust the concept: “Strong PP, which says basically, take no action unless you are certain it will do no harm; and second, the Weak PP, which says that lack of full certainty is not a justification for preventing an action that might be harmful.”³²⁸

This obfuscation is not accidental. In fact it is mirrored in the broad set of standard assumptions that are built into empiricist models that serve as the competitive alternatives to the Kantian model set forth here. In his efforts to vindicate a strong metaphysical reading of Kant’s ethical theory against the standard and generally accepted constructivist approach, Allen Wood argues that this Rawlsian approach is, on many points, contiguous with the scientific and intuitional elements of Sidgwick’s utilitarian theory (e.g., Rawls’s “considered judgments” and “reflective equilibrium” bear strong points of similarity to Sidgwick’s procedures for achieving uniformity among various

³²⁸ Julian Morris, “Defining the Precautionary Principle,” (1-21) in *Rethinking Risk and the Precautionary Principle*, Julian Morris, ed. (Oxford: Butterworth Heinemann, 2000), 1.

classes of intuitions).³²⁹ In Wood's view the Rawlsian approach creates serious misinterpretations of Kantian theory because the categorical imperative procedure is ultimately subordinated to the foundational procedures for generating considered judgments.³³⁰ This leads, in Wood's view, to a seriously misguided preoccupation with rigidly constructed ethical cases: "cases of shipwrecks with lifeboat shortages and cases where unsuspecting patients are dismembered to save five other people," or what may be charitably described as "trolley car ethics."³³¹ This preoccupation leads to a "'scientific' conception of ethics" that is primarily, if not exclusively, concerned with generating a content of ethical decisions and judgments in every case based upon "ambitious demands for clarity and precision." There is thus a low tolerance for exceptions or hard cases:

Where there is unclarity or indeterminacy in our principles or a threat of conflict between them or any uncertainty about how they apply to particular cases, we should try to remove these deficiencies by formulating the principles more precisely, testing these formulations against overall coherence with our moral intuitions.³³²

This is precisely the approach assumed in the Morris interpretation in its "weak" versus "strong" readings of the precautionary principle, which as noted is only a straightforward restatement of the prevention principle and which requires a specific decision content generated under precisely defined conditions under the "scientific" conception of ethics. To quote Wood again: "On this conception, the aim of moral theory will be to settle all moral questions and make moral decisions, as far as possible,

³²⁹ Allen Wood, *Kantian Ethics*, *op cit.*, 43-54. See also Katrin Flikschuh, "Kant's Kingdom of Ends: Metaphysical, Not Political," (119 – 139) in *Kant's Groundwork of the Metaphysics of Morals: A Critical Guide*, Jens Timmermann, ed. (Cambridge: Cambridge University Press, 2009) 122 - 123.

³³⁰ *Ibid.*, 282-283.

³³¹ *Ibid.*, 44. Wood aims his criticism against "philosophers who make use of carefully crafted if artificial examples in order to test and refine moral principles – examples such as those in which you happen to be positioned so as to throw the switch and alter the course of a runaway trolley, which will kill one group of people if you don't throw the switch and another group of people if you do." (44).

³³² *Ibid.*, 47.

by a rigorous derivation from precisely stated principles ... leaving minimal room for disagreement among various interpretations or applications of the principles to specific circumstances.”³³³ By contrast, the UNESCO interpretation does not seek, in the event of uncertainties, “to remove these deficiencies by formulating the principles more precisely” but rather recognizes that a decision content cannot be generated at all. Under the UNESCO interpretation it is recognized that uncertainty is a *higher order* issue that requires the invocation of the PP as an a priori principle once empirical conditions are confirmed with respect to the state of scientific disagreement or uncertainty about a given state of affairs. The prevention principle, on the other hand, is asserted by Morris in the place of PP because the prevention principle is a first order principle, and it is simply a given for Morris that all principles are first order principles because under the “scientific concept” we must always be able to generate a content of moral decisions.

This same assumption is rigidly embedded in all empiricist and constructivist approaches, finding its way, for example, into the Copenhagen Consensus, which asserts that all human problems worth solving can readily be subjected to a cost benefit analysis and which therefore rejects issues like climate change exactly for the reason that higher order uncertainties requiring explicitly political solutions (i.e. solutions that cannot be determined through cost benefit analysis) are generated. On such empiricist approaches instrumental rationality is the only form of rationality accepted, from which it follows that human beliefs will always align with objectives set by desires, that markets must then, almost by definition, be structurally sound and institutions reliable, that man must, in essence, be the measure of all things, functioning in a first order, empirical world

³³³ *Ibid.*

where all problems can, in principle, be subjected to resolution through cost benefit analysis.³³⁴

Kantian constructivists like Onora O'Neill accept and fully adopt the Morris interpretation of the precautionary principle without reservation because their worldview is fully invested in intersubjectivist beliefs in morality as socially based and thus entirely directed to concerns as to what we owe each other. There is no room for a metaphysical reading of Kant under which necessary states of affairs – states of affairs that must be actively maintained - provide the conditions of possibility of social existence. There is no room for higher order a priori principles that pertain under conditions of uncertainty with respect to our capacity to act into nature or into markets and thereby generate highly dangerous conditions that pose a potential threat to social existence. As a result, as Andrew Barry notes, O'Neill entirely misinterprets the precautionary principle in her work on bioethics, falsely attributing to it the belief that government can eradicate risks and, concomitant with this belief, falsely accepting it as the cause of a purported general irrationality in public thinking based on unwarranted fears of scientific progress.³³⁵

The necessity for higher order principles as established in the UNESCO interpretation of the precautionary principle can be clearly seen in some of the responses to the current global credit crisis. In June 2009 the U.S. Treasury Department issued an

³³⁴ A critique of the Copenhagen Consensus based upon these higher order considerations can be found in Tom Burke, "This is Neither Scepticism nor Science – Just Nonsense," *The Guardian*, October 23, 2004. The contrary view supporting the Copenhagen Consensus based on the cost benefit argument can be found in Neil Reynolds, "Why Climate Change May Not Pay Off," *The Globe & Mail*, August 8, 2008, which argues the libertarian/free market case that problems not subject to cost benefit analysis, including issues of global warming and climate change, are likely not worth addressing or solving because the very absence of scientific evidence suggests the absence of any serious problem (as per the precautionary principle).

³³⁵ Andrew Barry, "Political Innovation and Scientific Uncertainty: A Comment on the Precautionary Principle," http://www.gold.ac.uk/media/barry_political_innovation.pdf. See also Onora O'Neill, *Autonomy and Trust in Bioethics* (Cambridge: Cambridge University Press, 2002), 1-12, 162-164; and Onora O'Neill, *Constructions of Reason: Explorations of Kant's Practical Philosophy* (Cambridge: Cambridge University Press, 1989), 206-218.

exploratory white paper on the need to establish new standards for financial regulation and supervision.³³⁶ Among its five central objectives was the identification of financial institutions deemed to be crucial to the effective functioning of markets. Such institutions, designated as “Tier 1 Financial Holding Companies,” were to be made subject to special oversight within the context of specific new forms of supervision provided to financial markets to ensure that they are able “to withstand both system-wide stress and the failure of one or more large institutions.”³³⁷ In short, institutions capable of generating “systemic risk,” were targeted for concentrated oversight.

However, designating a firm as “high risk” in this manner carries conditions of uncertainty such that the classification itself must be “second order” by necessity, i.e., it cannot be tied to specific first order criteria as the basis for such a classification. Highly specific criteria would grant the Federal Reserve minimal discretion in applying the classification and would create incentives for potentially affected firms to operate just below the level of the law. But on the other hand too much discretion would threaten the political independence of the Federal Reserve with respect to its overriding mandate to manage the money supply and set interest rates, given that the firm in question may be deeply tied to an administration or political party through lobbying or campaign contributions. There would thus be considerable uncertainty attendant upon the Fed’s decision to first classify and then, if prudent, to declassify such a firm. The firm might be a broker-dealer in the process of deepening its relationship with a given hedge fund, the

³³⁶ “Financial Regulatory Reform – A New Foundation: Rebuilding Financial Supervision and Regulation” *United States Department of the Treasury* (June 17, 2009) http://www.financialstability.gov/docs/regs/FinalReport_web.pdf.

³³⁷ *Ibid.*, 3.

operations of which are typically non-transparent.³³⁸ The fund might be building a high risk position in credit default swaps or exchange traded funds or else building a complex network of counterparty obligations, all of which could significantly increase systemic risk.³³⁹ Given that each of these parties might be unaware of the overall risk being created, the Federal Reserve would thus be operating under a considerable degree of uncertainty in designating a firm as high risk, and yet the Fed would clearly be justified in doing so in order to contain and control overall systemic risk. The point is that the Fed would in fact be invoking the precautionary principle under the UNESCO interpretation by doing so. Given the limits of theoretical reasoning to empirically determine the actual extent of systemic risk, the act of designating a specific firm would entail an exercise of pure practical reasoning; i.e., it could not be considered an act of instrumental rationality.

Such acts of designating financial institutions with respect to systemic risk thus instantiate the cases cited by Allen Wood with respect to “uncertainty or indeterminacy in our principles.” Such classifications would in fact set two essential moral principles, “impartiality” and “sustainability” in conflict with each other. Targeting firms without clearly defined criteria would clearly violate the principle of impartiality, but yet would be necessary to preserve the sustainability of the system as a whole. Sustainability would also be put under threat by specific instances of “acting into markets,” which could be tied to certain financial innovations or the utilization of existing products/services such as exchange traded funds.³⁴⁰

³³⁸ A detailed study of the ethical deficiencies of hedge funds is provided by Thomas Donaldson, “Hedge Fund Ethics,” (405-416) *Business Ethics Quarterly*, vol. 18, no. 3 (2008).

³³⁹ For an analysis of the role of exchange traded funds, their dangers and impact on market volatility see Minder Cheng and Anath Madhavan, “The Dynamics of Leveraged and Inverse Exchange-Traded Funds,” *Barclays Global Investors*, May 9, 2009.

³⁴⁰ In testimony before the U.S. Senate Commerce Committee on June 3, 2008, George Soros addressed the problem of the escalating price of oil because of alleged speculation in futures markets, arguing that

The utilization of the UNESCO interpretation of the precautionary principle to address problems of systemic risk by targeting specific financial firms thus provides a vindication of the Kantian model. Ethical rationalism proves necessary to both determine and manage states of affairs that ought to be the case, given the factors of uncertainty and the attendant need to invoke the precautionary principle. There is also a clear need to privilege the status of civil society (and to develop a role for corporate citizenship) in providing greater oversight over the functions of the state, given the conflicts of ethical principles and the necessity of building the knowledge base needed to address future financial crises. Given the global extent of the financial crisis, there is also a need for a cosmopolitan response on the part of all the world's civil societies. Nonetheless, there has been a tendency to downplay systemic issues and to focus instead on virtue theory as a principal response, as opposed to a specifically Kantian response. In a BBC interview, former Federal Reserve Chairman Alan Greenspan argued that financial crises are fated to recur because of entrenched features of human nature that inevitably repeat themselves in every crisis – not just greed for endless acquisition but also a marked proclivity for complacency during every upswing in economic cycles that vastly increases prosperity, carrying with it the conviction that rising wealth is a continuous phenomenon.³⁴¹

This “proclivity for complacency” is also cited by David Weitzner and James Darroch in their own assessment of the credit crisis.³⁴² As with Greenspan, greed and

institutional buying of commodity futures as an asset class was problematic because it was highly prone to the bubble phenomenon. Comparing this to the destabilizing effects of the use of portfolio insurance prior to the 1987 crash, Soros noted that “in both cases, the institutions are piling in on one side of the market and they have sufficient weight to unbalance it. If the trend were reversed and the institutions as a group headed for the exit as they did in 1987 there would be a crash.” George Soros, *The Crash of 2008 and What it Means: The New Paradigm for Financial Markets* (New York: Public Affairs, 2009), 232-236.

³⁴¹ BBC News, “Market Crisis Will Happen Again,” <http://news.bbc.co.uk/2/hi/business/8244600.stm>

³⁴² David Weitzner and James Darroch, “Why Moral Failures Precede Financial Crises,” (6 – 13) in *Critical Perspectives in International Business*, vol. 5, no. 1,2, 2009.

hubris, i.e., failures of virtue, are cited as central features of the crisis. However, given the analysis that has been provided by the Kantian model, certain weaknesses in these critical assessments begin to emerge. There are clear differences between assessments made during the market boom and those made retrospectively after the crash. As noted earlier, Greenspan originally credited the resiliency of free markets for absorbing and distributing risk more efficiently on account of the growing sophistication of financial innovations themselves. But retrospectively he cites greed, complacency and failures of virtue as causes of the calamity, thus creating clear logical inconsistencies in the ideology of free markets, which are always supposed to transform private vices into public goods. It is thus difficult to understand why the structural features of markets gain credit for market successes but then are exculpated in the event of market failures.³⁴³

Under a Kantian analysis, such structural features would be the central focus of retrospective analysis. For example it would be pointed out that the dynamics of the housing bubble continued to increase in intensity during 2004-2007 because of the rapid proliferation of credit default swaps, which permitted individual corporations to better manage their own risks, but which in fact dramatically increased systemic risk (as witnessed in the activities of AIG's financial products unit in London, which served as a crucial counterparty on many credit default swap transactions). As a result the mortgage companies and financial institutions that operated in the subprime market (especially the

³⁴³ In fairness, Mr. Greenspan has emphasized structural features in his own retrospective analysis. He and Bernanke both make reference to the "global savings glut" (i.e. the massive accumulation of surplus wealth earned by exporting nations during the boom periods of globalization) as a central cause of declining interest rates in 2002-2003 which precipitated the U.S. housing crisis. What is puzzling is Mr. Greenspan's failure to recognize these imbalances as cause for concern at the time they were happening, as indeed another former Federal Reserve chairman did. Cf. Paul Volcker, "An Economy on Thin Ice," April 10, 2005, B07. It should also be pointed out that the practice of attributing market failures to failure of virtue rather than structural factors is not uncommon in economics. Edward Prescott, for example, argues that economic downturns are less attributable to business cycles and tied more directly to a declining pace of technological advances, which induces workers to voluntarily take more time off work.

smaller players) could hardly have pulled back from these market excesses as competition grew more intense for fear of losing market share. Given the intense pressure thereby created to consistently meet quarterly profit targets, it is difficult to understand Weitzner and Darroch when they argue that “virtuous management involves a delicate balancing act between seeking out and developing innovative techniques and behaviors while at the same time keeping these innovations in check to ensure they are conforming to society’s norms of ethical behavior.”³⁴⁴ These managers were caught up in a vortex of profit maximization that left no room for questioning assumptions about the reliability of risk algorithms like VaR (value-at-risk) or the Capital Asset Pricing Model. Failures of governance must then be seen to a large degree as structural failures, i.e., the growing disparity between short term and long term incentives for corporate managers that resulted from this vortex and which threatened governance objectives such as fiduciary responsibility.³⁴⁵

Again, Allen Wood’s Kantian analysis is pertinent. Once empiricist ethical models developed by Rawls, Sidgwick and others were deemed to have created a “scientific conception of ethics,” that very imprimatur created an ideological mindset that demanded that the built-in assumptions of the model had to be always accepted on faith. Under the empiricist catechism of complete moral answers for all moral questions, when content is preserved by continually readjusting the balance of reflective equilibrium with

³⁴⁴ Weitzner and Darroch, *op cit.*, 7.

³⁴⁵ In a seminar presentation to Schulich Business School on April 15, 2009, “Ethical Issues in the Current Financial Crisis: A Preliminary Exploration,” John R. Boatright diverged from the Weitzner/Darroch analysis by seeking to limit the role of ethics and specifically the role of greed and hubris that is strongly emphasized in Weitzner/Darroch. Boatright essentially argues for the continuance of a moral free zone in business innovation in which considerable latitude must still be retained for “honest mistakes” that cannot be seen as “moral faults.” Even exceptionally foolish mistakes cannot be attributed to greed. However, this still misses the larger point identified in Kantian analysis that the materiality of the risks taken were vitally important, given the potential of the credit crisis to irreparably damage the global financial system.

respect to our considered judgments, such baseline assumptions as the structural solidity of markets and the soundness and reliability of institutions remain unquestioned. Under the Kantian model, by contrast, our practical reasoning must always supersede theoretical reasoning, especially in circumstances of uncertainty that may require the invocation of the precautionary principle. These exercises of practical reasoning are undertaken within civil society, which, utilizing a strong historical consciousness, seeks to exercise a strong level of control over the mechanisms of state and to expand this collective mindset into cosmopolitan contexts. Under this Kantian mindset there are no ideological assumptions with respect to the viability of markets and institutions, which must continually be kept under active monitoring and oversight based on moral rationality. It should also be noted that this domain of citizenship can readily be expanded to include corporations that have adopted commitments to corporate citizenship.

This Kantian approach is as applicable to contexts of acting into nature as it is to contexts of acting into markets. With markets, the structural concerns are focused on the complex interrelationships of different but related markets and the susceptibility of viable and liquid markets to those that are illiquid or are dominated by a few large players. Thus, new, untested innovations can create the potential for destabilizing the connections between these markets. Similarly, in nature, the natural connections between ecosystems can seriously magnify the dangers of systemic risk created by acting into nature. In the context of natural systems our concerns are with tipping points and feedback loops that seriously magnify the impacts of greenhouse gas emissions and other pollutants. It is in these contexts that scientific uncertainty with respect to the exact nature and timing of these structural events and issues generates the most concise criteria for invoking the

precautionary principle.³⁴⁶ These impacts in turn work hand-in-hand with concerns over resource depletion, concerns that threaten the viability of civilized existence on earth and therefore warrant a fully cosmopolitan response from the Kantian model. Depletion of (or a less than satisfactory maintenance of supplies of) crucial resources such as water, petroleum, fish, topsoil, etc. now require the full attention of all civil societies and their respective government agencies.

It is also interesting that proposed solutions to climate change problems include forms of geoengineering that essentially entail acting into nature. Such projects include cloud seeding, carbon sequestration and projects for artificially limiting the amount of sunlight reaching earth.³⁴⁷ Acting into nature in this way as a solution to problems of climate change carries its own risks of generating new problems under conditions of uncertainty. With respect to acting into markets, the various economic stimulus programs that have been implemented by various national governments represent artificial and yet controversial approaches for corrective action. Free market advocates contend that new forms of innovation could have the same impact of altering market structures in a positive way, creating cascading effects of promoting new forms of entrepreneurship.³⁴⁸

The case for the Kantian model has been made. In the concluding comments all of the themes and issues raised by this dissertation will be summarized and tentative recommendations will be made.

³⁴⁶ Bill McKibben, *Eaarth* (Toronto: Alfred A. Knopf, 2010), 47 – 101.

³⁴⁷ David Keith, “Dangerous Abundance,” (27 – 57) in *Carbon Shift*, Thomas Homer-Dixon, Nick Garrison, eds. (Toronto: Random House, 2009), 54 – 57.

³⁴⁸ Thomas Homer-Dixon, *The Upside of Down* (Toronto: Alfred A. Knopf, 2006), 214 – 219.

Conclusion

The overall objective of this dissertation has been the determination of the domain in which Kantian ethical theory and, specifically, the Kantian model developed in this chapter can effectively function (with respect to the problems of acting into markets and into nature identified in conjunction with the Enlightenment project and its twin assumptions) by comparison with more empirically oriented Rawlsian/Consequentialist theories. First, some of the issues highlighted in this chapter should be summarized.

As noted earlier, such theories work best when risk analysis is fully functional and is based on a menu of alternative states of affairs that can be determined in advance and are fully viable. Cost benefit analysis can then be utilized to project ideal states of affairs based on a plausible reliance upon impartial benevolence and the rational disposition of market agents, whose subjective preferences can be readily aligned with the objective requirements of the real world, given the assumption that there are no gaps or anomalies between short and long term benefits and harms. In this scenario descriptive rationality determines normative rationality to a significant degree, and so reliance can be placed upon instrumental rationality to undertake analyses of moral issues based largely on the “content” of the experiences and events to which they give rise.

Problems emerge when uncertainties arise that cannot readily be subjected to cost benefit analysis, uncertainties created by technological advances that yield valuable short term benefits, but which leave potential long term social costs or other problems that can be categorized in terms of “known unknowns” and “unknown unknowns.” Under such scenarios, the precautionary principle needs to be exercised in cases where scientific

consensus cannot be established and catastrophic results are possible. In cases where the doctrine of double effect applies, what can be anticipated/predicted is the invocation of the principle itself, not a specific content of events or states of affairs. In circumstances of this sort the advantages of these theories – expanding pools of scientific knowledge, the mutually reinforcing gains of pure and applied sciences – tend to break down.³⁴⁹

The Kantian model, with its strong, formal orientation, is then seen to its best advantage. Rather than pushing problems back into an increasingly foreshortened future as scientific complexity increases, the Kantian model is constantly concerned with aligning actual states of affairs with states of affairs that ought to be the case. It takes an alternative, metaphysical approach by establishing the importance of pure practical reason over theoretical reason, a contrast to more empirically oriented approaches, in which exercises of instrumental rationality become more all-inclusive and encompassing and thus exclude possible exercises of purely moral thinking. As opposed to assuming the viability of content-oriented analysis, the Kantian model is deeply concerned with historical transformations and projects concerned with the perfection of laws over time.

Kantian theory is very much concerned with empirical issues, and in this regard the divisions and grounds for cooperation between the metaphysics of morals and practical anthropology were noted. It was further noted that such issues do create grounds for cooperation between Kantian theory and other theories such as Rawls' theory of justice and consequentialism. However, the dynamics of these theories tend to push

³⁴⁹ Although scientific knowledge accumulates rapidly in all domains, it may be deficient in exactly those areas most pertinent to problem resolution. This is a result of the ingenuity gap. This gap also explains the possible lack of responsiveness of pure science to difficult technical problems that arise in applied sciences because major discoveries in pure science are often highly contingent in nature. In all of these cases, science gravitates more naturally to areas of greatest profit potential, not necessarily those that pertain to the maintenance or sustainability of structural systems. Cf. Thomas Homer-Dixon, *The Ingenuity Gap* (Toronto: Vintage Canada, 2001).

them in opposite directions.³⁵⁰ With increasing scientific and technological complexity, empirical theories are more concerned with the proliferation of hypothetical imperatives and the means of keeping them successfully aligned. It was noted that this places a strong emphasis on social morality (e.g., “government house utilitarianism”), and this increases the concern with impartial benevolence as a key principle, along with a greater alignment with pragmatist theories.³⁵¹ In the Kantian model, by contrast, difficulties were said to emerge as the model is updated from Kant’s original vision, one closely aligned with Hannah Arendt’s first stage of engaging with nature, and the model must be updated for increasing scientific complexity and thus must take full account of Arendt’s

³⁵⁰ This is evident in efforts to interpret Kant’s ethical philosophy as consequentialist. David Cummisky’s detailed and comprehensive project is based on his establishment of two tiers of value: one based upon the intrinsic value of rational nature itself, the other on the value of agent neutral states of affairs that facilitate rational nature itself. He rejects Christine Korsgaard’s interpretation of Kantian ethics, which is based on her claim that it is an ethics entirely oriented to what we owe to each other and not to states of affairs. In her words, “Values are neither subjective nor objective, but rather are intersubjective. They supervene on the structure of personal relations.” (Christine Korsgaard, *Creating the Kingdom of Ends* (Cambridge: Cambridge University Press, 1996), 276). Cummisky argues instead that values are intersubjective, but also agent neutral, and so do require an engagement with states of affairs based on the two tiers of value. Thus, on Cummisky’s account, Kantian ethics can fully engage the kind of “trolley car” projects that Allen Wood rejected as incompatible with a Kantian approach. Wood, by contrast, links Kant’s ethics to a robust form of moral realism that has been advocated on Kant’s behalf in this dissertation. David Cummisky, *Kantian Consequentialism* (New York: Oxford University Press, 1996). A second, less comprehensive project to interpret Kant in a consequentialist light was that of R.M. Hare, who by his own admission did not make a conclusive case, but merely pointed out consequentialist attributes attached to Kant’s ethical theory. Like Cummisky, Hare emphasizes the second formulation of the categorical imperative (humanity as an end in itself). He also describes Kant as a “rational will utilitarian” and, as a non-cognitivist, would also reject any depiction of Kant as a moral realist. (R.M. Hare, *Sorting Out Ethics* (Oxford: Clarendon Press, 1997), 147 – 165. Hare’s position is rejected by Jens Timmermann, “Why Kant Could Not Have Been a Utilitarian,” (243 – 264) *Utilitas* (November 2005), vol. 17, no.3). Both Cummisky’s and Hare’s approach are rejected by the arguments set forth in this dissertation, which are based on the metaphysics of pure practical reason, which in turn creates a distinction between *recht* (external freedom to use/dispose of property in a sustainable manner in accordance with universal law) and ethics (internal freedom).

³⁵¹ Cf. Richard Rorty, “Is Philosophy Relevant to Applied Ethics?” (369-380) *Business Ethics Quarterly* vol. 16, no. 3 (2006). Rorty entirely rejects traditional epistemology, especially that based upon Kant’s transcendental idealism, and, following Quine and Davidson, advocates a social justification of knowledge. This then leads directly to his view that morality is ethnocentric in nature. As with the Cummisky and Hare approaches to consequentialism, there would be no way to distinguish short and long term benefits and harms and no way to exercise or invoke the precautionary principle via analysis of states of affairs (moral realism). These can be seen as the primary factors that separate metaphysical from empirical approaches.

second and third stages. It will be seen that what is of central concern in this updating is not the social group but the individual agent and the nature of her autonomy.

This dissertation must therefore conclude with a brief account of how this updating of the Kantian model should best be accomplished, one that takes account of the issues raised in chapter two with respect to these second and third stages.

As noted, Kant's fundamental concern is with the individual agent, her rational capacities, and the inner resources needed to develop these capacities over time, especially with respect to the rational destiny of the human species as a whole. To succeed in this endeavor the agent exercises a maximal degree of personal autonomy free of outside coercion, a state which Kant terms "internal freedom." To secure this inner freedom, man is rationally compelled to attend to the conditions of "external freedom," i.e., to leave the state of nature under a mandatory summons of reason and join the civil state where coercion must be exercised by sovereign authorities in order to secure basic property rights and thus ensure the sustainability of this state of inner freedom. And it is here where Kant's differences with his empiricist counterparts stand out most clearly. Kantian theory and the model derived from it are geared so strongly to this concept of human rationality that he makes minimal concessions to favorable empirical conditions that might prompt a high degree of cooperation and impartial benevolence within human societies. In contrast to Locke, Kant does not look to abundant natural resources as a factor in building social relationships; instead, he goes a long way down the road with Hobbes in looking at factors such as radical evil and unsocial sociability as potentially destructive forces undermining the possibility of social existence.³⁵² Human societies are

³⁵² It can be argued that Kant goes to unwarranted extremes in insisting that the civil state is a necessary requirement of pure practical reason, and therefore requires a metaphysical foundation for justice that does

not naturally sustainable and alignments between duty and inclination are not easily achieved without significant, consciously applied efforts by individual agents to exercise their autonomy and freedom to the fullest possible extent by acting on the basis of pure practical reason. Kant does not view society as an organism that readily aligns group interests with collective responsibilities, but as a composite of individual agents who respond to their ultimate duties to act on principle.³⁵³ These agents have fundamental commitments to truth, honesty and promise keeping that hold as primary conditions of “*recht*,” of basic rationality and of membership in the civil state, before these commitments are applied in specific relationships with others that involve ethical duties.

It is in this respect that Kant provides the best answer to Rousseau’s critique of the Enlightenment raised in chapter two, a critique that Kant himself claimed altered his basic approach to moral philosophy. Rousseau saw a divide between the agent’s relation to nature and her relation to other men, the latter being a source of corruption and an

not in any way depend upon the contingent or implicit consent of the governed or the possibility of maximizing welfare in a way that would motivate such consent. Citizenship is a moral necessity of the highest order, a compulsory edict that compels collective cooperation in the securing and disposing of material necessities deemed crucial as conditions of possibility for the development of moral autonomy. The rejection of such “extremism” is clearly evident in the Kantianism of Habermas and Rawls, in the intersubjective discourse ethics of the former and in the empirically oriented social contract theory of the latter. Both are based upon the plausibility of the liberal state as an ideal, and indeed there has been a significant conversion of formerly totalitarian states into democracies. The preservation of democratic states has been a clear objective of the post World War II order, and has been based upon anticipation of continuous economic growth in the West. With the possibility of continued growth now under threat, there are indications of return to authoritarian or totalitarian rule, as is now evident in Hungary and Romania as a response to the sovereign debt crisis in Europe. In what can be seen as a justification of the “extremism” of Kant’s approach, Hannah Arendt has argued that the most insidious danger of totalitarian regimes is not the violence, terror, noble lies or propaganda, but the destruction of the judicial sense in human beings. “The first essential step on the road to total domination is to kill the judicial person in man. This was done, on the one hand, by putting certain categories of people outside of the protection of the law and forcing at the same time, through the instrument of denationalization, the non-totalitarian world into a recognition of lawlessness; it was done, on the other, by placing the concentration camp outside the normal penal system, and by selecting its inmates outside the normal judicial procedure in which a definite crime entails a predictable penalty.” Arendt is describing Nazi Germany, but her words could also be used to describe U.S. policies with respect to extraordinary rendition, treatment of illegal immigrants and incarceration at Guantanamo base. Hannah Arendt, “Total Domination” in *The Portable Hanna Arendt, op cit.*, 128.

³⁵³ The rejection of Kant’s ethics on these grounds came with Hegel, who argued against Kant that morality could have motivating force not through the categorical imperative, but through *sittlichkeit*, the ethical life in society that Hegel believed possible only in a civil state understood as an organism.

impetus towards seeking power rather than developing rightful relationships to the natural world. Kant agreed, but found the solution in devising, as Ripstein formulated, relationships between men that were at the same time explicitly tied to the relationships each held with the natural world, relationships sufficiently strong to make each one physically self-sufficient.³⁵⁴ As noted, this network of relationships became the basis of Kant's self-sufficiency or "independence" condition, which along with freedom and equality constitute the three a priori conditions needed to establish the civil state. But Kant also took this self-sufficiency condition one step further by developing his idea of "publicity," noted earlier in conjunction with his alignment of politics and morality. This idea will lead to a better understanding of the difficulties encountered with the Kantian model in its transition from Arendt's stage one to stages two and three.

As discussed earlier, Kant's own model was based on finding an appropriate balance between fate and providence, between ultimate and final ends; i.e., as human beings develop their capacities for theoretical rationality over time, parallel capacities for the exercise of pure practical reason develop in tandem, and ultimately overtake and rule over the domain of theoretical reason. But Kant does not foresee this as a limiting process over scientific thought; indeed, in spite of the reservations he shares with Rousseau, Kant does share the Enlightenment enthusiasm and optimism with respect to theoretical reasoning and fully shares the widespread admiration for the achievements of Newton and the other great scientific thinkers. From our twenty-first century perspective we can see that the discoveries up to and including Kant's era would have been those that produced immediate and lasting benefits with any potential harms subject to readily

³⁵⁴ Arthur Ripstein, *Force and Freedom: Kant's Legal and Political Philosophy* (Cambridge, Mass.: Harvard University Press, 2009).

identifiable scientific principles. This was the era dominated by pure science, the practical applications of which could be readily assimilated. The men of property whom Kant visualized as citizens were often amateur scientists themselves and could readily stay abreast of all important scientific discoveries.

The contrast to our present age is very clear, as was detailed in chapter two. The powers to act into markets and nature have made applied science preeminent and have greatly magnified the risks of uncertainty with respect to the externalities and long term risks of scientific activity. Various thinkers such as Hobson, Minsky, Tainter and Homer-Dixon have documented the structural flaws attendant upon modern activities in both markets and in science. Climate change represents very real dangers that have resulted from unrestrained technological progress. All these negative developments threaten to undermine the very self-sufficiency included among Kant's a priori conditions for social existence. The domain of Kant's external freedom is now one that exhausts all of our rational capacities and leaves little room for specific exercises of moral rationality. The list of basic necessities that were to have been secured by external freedom has, for wealthy nations, expanded well into the domain of what were once luxury goods. Under globalization this process threatens the capacities of those in poorer nations to secure basic necessities, thus putting Kant's cosmopolitan ideals under threat.³⁵⁵ With growing

³⁵⁵ The distinction between necessary goods and luxuries is one that dates back to Adam Smith with the distinction between "value-in-use" and "value-in-exchange" and spawned the water-diamonds paradox that was not resolved until the end of the nineteenth century (by Jevons and others) with the development of marginal designations in economics. Ricardo gave up attempts to establish a fixed value for subsistence, recognizing that such determinations were contingent upon the habits and customs prevalent in society. In Western societies, the acceptable level of subsistence has risen with the standard of living. However, in the developing world, the lack of access to food and water are problems that have been getting worse as global populations continue to rise and face the limitations of resources. In 2005, before the ongoing round of spikes in global food prices began to seriously escalate, the annual death toll from poverty related causes was approx. 18 million worldwide, about one-third of all human deaths.

uncertainty, we are less able to exercise the autonomy required by citizens and agents to enable their identification of universal principles and their capacity to act upon them.

Kant unintentionally anticipated this eventuality by providing a second dimension to the self-sufficiency condition beyond mere physical independence. To ensure that citizens could develop their capacities for independent thinking, Kant made provision for the public use of reason or what Kant sometimes referred to as “publicity.” Earlier in this chapter it had been noted that Kant used the term “publicity” to refer to an imperative for making full and transparent disclosures based on principles, as in the principle, “all maxims that require publicity (in order not to fail of their end) agree with both politics and morality” to express the necessity for vigilance by nation states in working collectively towards the rational goal of a global federation of all nations. Kant uses the term again to describe the moral necessity for a public forum in which citizens must express their rational assessments of public issues.

As noted earlier, Kant does not advocate freedom of speech in the modern sense, and in fact he makes it clear that sovereign authorities have extensive powers to limit freedom of expression in the service of national interests. However, Kant insists that there must be some sort of forum, whether a public square, town hall meeting or mass circulation publication in which individual citizens have an unrestricted right to address public issues using the full exercise of their powers of reason, and thus contribute to the shaping of public policy. Citizens do not require any particular expertise to address a given issue, and their opinions may well end up thrown into the hopper, but it does matter to Kant that citizens exercise their self-sufficiency and independence in the public domain of reason as well as in the empirical domain of physical reality. By addressing

“the public at large” in a fully rational and transparent manner, citizens make a vital contribution to the shaping of the “general will” that in turn shapes the community and public opinion, a force that must at some point in a nation’s history be capable of asserting a collective will over the sovereign state and its powers of coercion.

Kant’s full answer to Rousseau thus begins to emerge. While recognizing the danger of corruption that is risked in all forms of civil authority, Kant rejects Rousseau’s “back to nature” solutions and the restrictions re: limiting dissent, enforcing conformity in the shaping of the general will and privileging ideals of natural innocence more appropriate to a “noble savage” than to a modern European. Rather than acknowledging Rousseau’s simplistic links between man and nature, Kant emphasizes the very networks between men that Rousseau rejects as the principle source of corruption and links those very networks back to nature in the demand for physical self-sufficiency. As Arthur Ripstein notes, these very networks and the complex of intricate relationships they entail are themselves the metaphysical constituents of Kant’s a priori condition of independence.³⁵⁶ But along with such networks runs a concomitant, ancillary set of relationships that bind men together in a public forum necessary for building the idea of the general will as a means for forging public opinion. Kant does not intend that man’s relationship with nature be characterized by a blind, passive obedience and compliance with natural forces as Rousseau intends. Rather, Kant fully expects humans to develop their rational potential to the full, to change and shape nature as the demands of technological development dictate, and thus fulfill man’s destiny as a fully rational being. But just as pure practical reason must always supersede theoretical reason, just as providence must always eclipse fate, and just as final ends must always run ahead of

³⁵⁶ Arthur Ripstein, *op cit.*

ultimate ends, Kant does expect that human exercises of stewardship with regard to the natural world will be governed by the full extent of moral rationality. Under these caveats, an updated Kantian model would make full allowances for the human capacity to act into markets and into nature in the expectation that the precautionary principle would be invoked as required and principles of sustainability would always be upheld.

Such an active citizenry, acting to the full extent of its rational powers would thus be able to aspire to Kant's ideal of the general will, a general will which, as noted earlier, is tied to an ideal of natural law. Such an active citizenry, acting to the full extent of its rational powers, would be able to engage with scientific and technological experts in dealing with problems related to acting into nature and markets at Arendt's second and third stages. Under the empirical approaches taken by utilitarians, Habermas, Rawls and others, there would be too much temptation for such experts to gravitate fully to private markets and sell their expertise for profitable gain. Kant's system goes much farther in ensuring that citizens have sufficient power to stay fully engaged with their experts in order to ensure that the highest standards of economic, social and environmental sustainability were maintained. Such citizens would have the best insight as to when to engage the precautionary principle and under what circumstances. In Kant's view, civil society is best understood as a religious community, and religion in Kant's view is best understood as the domain in which rational values and principles of sustainability would be held in the highest respect.

Finally, as noted earlier, Kant's theory is best understood as one committed to moral realism rather than constructivism, for in this way we can best understand the more recent moves in the Kantian literature toward separationsim. With a clear distinction

between *recht* and ethics, states gain a stronger flexibility to act quickly with respect to problems related to acting into markets and nature, as alignments between morality and state policy might have to be deferred into a longer term. Clearly this can be necessary when dealing with the uncertainties attendant upon acting into markets and nature. For Kant this would entail subordinating normative ethical theory to the overriding metaethical strictures of moral realism in order to realize the levels of moral motivation tied to internalism and to pure practical reason, as discussed earlier. Moreover, though, moral realism competes successfully against alternative views such as constructivism and emotivism because on the Kantian account presented here, reasons for action are important, and such reasons are tied to states of affairs that both are the case and ought to be the case. Thus, provisions have to be made for “noble lies,” propaganda and other forms of social deception that may well engage different value systems, but these would be value systems that would be tied objectively to states of affairs and thus are not subject to intersubjective determinations. However, these are all subjects that were raised in this dissertation only in a preliminary way and will have to be developed in more detail in future projects.

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